DOCUMENT RESUME

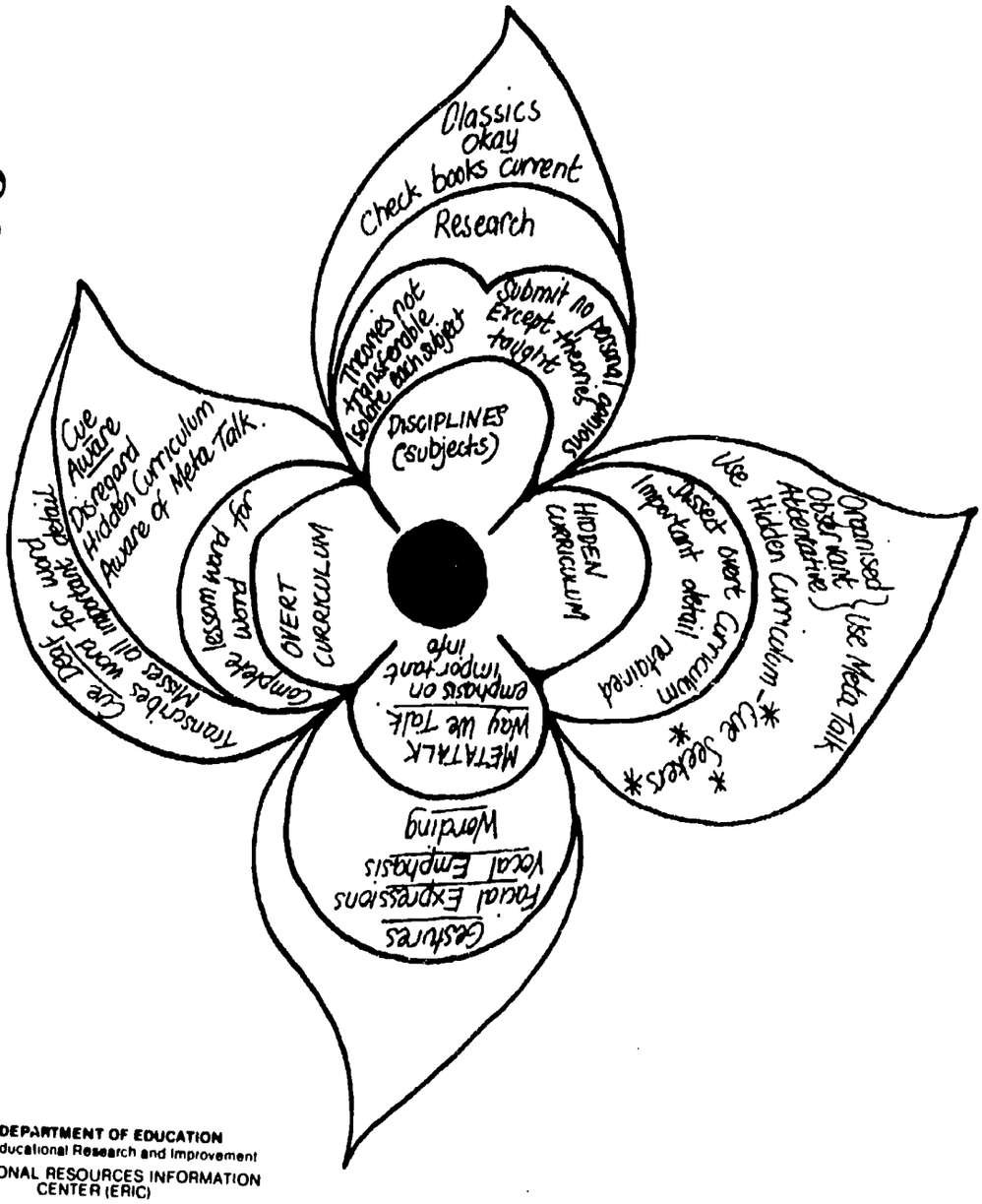
ED 340 923 CE 060 128

AUTHOR McCormack, Robin; Pancini, Geraldine
TITLE Learning to Learn. Introducing Adults to the Culture, Context and Conventions of Knowledge. A Guide for Teachers.
INSTITUTION Footscray Coll. of Technical and Further Education (Australia).
SPONS AGENCY Victoria Ministry of Education, Melbourne (Australia). Div. of Further Education.
REPORT NO ISBN-0-7241-9800-8
PUB DATE 91
NOTE 198p.
AVAILABLE FROM Division of Further Education, Ministry of Education and Training, GPO Box 4367, Melbourne, Victoria 3001, Australia ($25.00 Australian).
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *Adult Basic Education; *Adult Learning; Adult Students; Age Differences; *Andragogy; Cues; Foreign Countries; *Learning Strategies; Libraries; Library Instruction; Long Term Memory; Metacognition; Reading Instruction; *Reentry Students; Refresher Courses; Schemata (Cognition); Short Term Memory; Teaching Guides

ABSTRACT

This guide is designed for those teaching return-to-study courses for adults. It is divided into two parts. A course guide begins by explaining why past approaches for equipping students for academic success are unhelpful. The approach used in this guide is described by drawing on cognitive psychology, especially about short- and long-term memory, schemas, and metacognition. The course guide concludes with a one-page "Reflections Sheet" designed to help users confirm their understanding of the ideas and help them to develop their own repertoire of anecdotes, examples, and reflections about learning. Part 2 consists of session guides covering five areas: learning and short-term memory, long-term memory and revising, teacher cues and academic knowledge, libraries and the Dewey system, and reading and the structure of books. Each session guide provides a variety of resources to assist in teaching a 3-hour session. A guide lists the key points of the session and provides the following: sample lesson plan with summary checklists; more detailed background information on the main ideas for the session; teaching notes to suggest ways of presenting the course; and copies of homework sheets, handouts, and overhead project slides. Each session concludes with a one-page reflections sheet. Anecdotes about learning to learn and quotations are included throughout the manual, set off in boxes. (YLB)



Learning to learn

Introducing Adults to the Culture, Context and Conventions of Knowledge

A guide for teachers

Robin McCormack

Geraldine Pancini

FOOTSCRAY COLLEGE
OF TECHNICAL AND FURTHER EDUCATION
RETURN TO STUDY

An Adult Basic Education project funded by the Division of Further Education, Victoria

First published by the Division of Further Education
525 Collins Street Melbourne 3000 December 1990
Revised November 1991

National Library of Australia
Cataloguing-in-Publication data

McCormack, Robin and Pancini, Geraldine
Learning to Learn

ISBN 0 7241 9800 8

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Abstract: This is a guide for those teaching return to study courses for adults. The publication is divided into two parts, firstly a **Course Guide** which begins by explaining why the authors have found past approaches for equipping students for academic success unhelpful. They describe their approach drawing on cognitive psychology especially about short and long term memory, schemas and metacognition.

The second part of the publication consists of session guides covering the areas of learning, memory, knowledge libraries and reading.

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Acknowledgements

Producing this document has been a long involved process for us. Needless to say, it has also affected others who helped in many ways, giving their time and support during the years of teaching the Return to Study Course at Footscray College of TAFE and especially through the past year.

We would like to acknowledge all the students who have done the course, particularly those who have kept in contact with us about their later progress and those who contributed their reflections to this project.

We are grateful for the consistent support and encouragement from our colleagues at Footscray TAFE. We would like to acknowledge the support of Max Radcliffe, an administrator who can keep his eye on the ball even during the wildest institutional scrummaging, and Daryl Evans, who has supported the work of the Language Development Centre for many years and who has always been inspirational in his approach to teaching Adult Basic Education. Also we would like to acknowledge Ruth Evans for putting up all the after hours demands on Daryl's time — we thank you both. To past and present members of the Language Development Centre — Peter Moraitis, Trisha Sabey, and Ewa Haire — who took part in the early formulations of this and other projects of the Centre — many thanks. Also, we would like to thank Ruth Irving and Loriane Tobais, who have helped "carry the load" while we've been putting our energies into this project and to Everett Weaver, Dorothy McManus, Hilary Keefe and Pat Forward for teaching and trialling these materials.

From the Division of Further Education, thanks to Rosa McKenna who always seemed to understand that, given the opportunity, we could translate theory into practice and eventually practice into a curriculum document. We have appreciated Rosa's encouragement and advice at so many points along the way, not to mention her ability to be consistent and firm in nagging us along to completing this work. Thanks, Rosa.

Many thanks to Chris Fry, Adminstrative Assistant and friend, for her help and support — both inside and outside the workplace — and to Anne Hershal for her work on the mindmaps.

Thanks to Clint Smith for his valuable comments and for shaping up the final product during difficult institutional times.

Lastly, thanks to Drew, Cody and Kellie; and especially Alice, who showed a patience and understanding well beyond her eight years.

Footscray
November 1990

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Preface

The curriculum presented on the following pages was developed as the initial part of a return to study course for adults at Footscray College of TAFE. Since that time, there as been a big increase in the number of preparatory courses, and as a result a greater demand for ideas and curriculum materials to assist teachers preparing students for further study.

The manual

Students

This manual is about helping adults to learn. We began as teachers interested in helping students from the western suburbs of Melbourne who had not had the opportunity to finish secondary school but who wanted to return to further study. By working with these students, we have come to know and understand a lot about what's needed to survive and succeed at tertiary study. This manual is the result of that experience — the experience of preparing mature age students for special entry into Arts and Humanities courses.

Over the years we have developed, tried, and rejected different ways of helping mature aged students "get onto" what's expected in further study. We have learned what students need to know when entering first year courses — the major ideas, ways of thinking, and (most importantly) the necessary skills for writing good essays. We have learned — often the hard way — the delicate balance between the explicit teaching of a concept and the discovery of that concept in real life; when to be slow and gentle and when to make students grapple with difficult material; when to intervene in a piece of writing and when to ignore something that they are not yet ready to take on board.

We have followed many students on through their later courses to keep in touch both with how they were doing, and also to learn what exactly is required in courses where listening to lectures, serious reading and essay writing are essential. We fed this information back into the course. We have learned a great deal from students who went on but kept in touch over the years. We have also learned a lot from particular staff in the tertiary institutions who have been very helpful over the years.

Teachers

Another source of feedback we have drawn on is teachers who sat in on the sessions — some for a few weeks, some for the entire course. They were usually in a similar teaching situation looking for ideas and practical strategies for their classes. They came from TAFE Colleges, University Skills Units, and Community Houses. They took away the ideas and handouts, and kept in touch about what they found helpful. Word-of-mouth meant that more and more enquiries came. Did we have something in writing we could send? Could they come and discuss what we do? Were the materials available to take away?

Clearly, many other teachers were interested, and clearly not everyone could attend the classes. We thought if we did some in-service work and talked to larger groups this might reduce the time given to those seeking assistance. A common reaction when we presented the materials at in-service sessions for adult education practitioners was "It seems so obvious, I don't know why I haven't thought of it that way before", or "I wish someone had told me this when I was a student". Yet, this led to even more enquiries, which meant that rather than solve the problem, we had created a bigger one. Finally, it seemed that we needed to sit down and write. This is our first draft of that process.

Scope

Our main interest is language education and teaching, particularly the teaching of reading and writing. We have taught in primary, secondary, TAFE, and at Tertiary level in teacher education. We believe that to be able to do well at further study, you need to be able to write and that writing can be taught. Academic understanding is never just a matter of being able to discuss in class, or read and understand ideas. Not to teach writing means not preparing students for the task ahead. However, the limits of this project mean that this manual is not about writing, but about an earlier stage of the course: learning how to learn. This is because *it has been our experience that to first demystify and re-frame notions of learning is an important step towards developing the attitude that "I can do it!"*

Who's it for?

As adult education takes place in many diverse environments and circumstances, the decision about who this material is aimed at, and in what context it will be used, was not a straightforward one. However, in the end, *we have written the materials for an adult education worker or teacher who has no experience with return to study programs and would welcome a fairly detailed description of what to do* in a sequence of five sessions. Of course, more experienced teachers will browse the material and select what seems to suit their situation.

We should, however, point out three things:

- you should read the Guide to the Course before trying to teach any of the sessions
- the sessions are designed as a sequence — one leading on to the other — and build on the ideas of previous sessions
- we do not see these five sessions as representing a full Return to Study Course, but as a starting point. In their original context, these materials represent approximately 15 hours of a 90–hour course.

The Footscray Return to Study Course

Who for?

These materials were designed as the beginning of a tertiary preparation course, which leads on to reading an expository text and learning to write expository essays and eventually, towards the end of the 30 weeks, to be able to write an academic essay of first-year tertiary standard. However, we believe the material presented in this manual is relevant to adults preparing to do just about any type of further education, whether in Adult VCE, TAFE, or tertiary.

Who has attended?

The course at Footscray began about 10 years ago. In most years we have run four sessions a week of about 25–30 students in each group.

It is very hard to generalise about "who the students are". In fact, they are everybody: there have been farmers, housewives, removalists, bank clerks, sales clerks, storemen, security guards, labourers, nurses, secretaries, and hairdressers. Most students have come from the western suburbs or the inner areas of Melbourne, but they have also come from Gisborne, Frankston, Belgrave and Geelong. They are Australians; first and second generation Europeans; recent arrivals from Chile, El Salvador, Vietnam and Lebanon. There have been students with physical disabilities, deaf students, blind students and dyslexic students.

After the course?

Just as they are from many different places and backgrounds, the students have gone on to a variety of institutions. They have taken up study at

- Footscray TAFE
- Footscray Institute
- Western Institute
- Deakin University
- LaTrobe University
- Melbourne University

Some have decided not to continue study, and others have gone into the workforce or received promotions.

Course outline

While this material represents only the first five weeks of the full course, we thought it might be a good idea to give a brief run down of the course as a whole.

After the introduction on "Learning How to Learn" contained in this manual, we spend the rest of the year reading and writing essays:

- We read and discuss approximately 50 pages a week from the set text, *The Third Wave* by Alvin Toffler, 450 pages in all.
- During this time we begin to write essays and we spend time carefully and systematically pointing out the specific linguistic and textual structures employed in academic writing.
- Several sessions are spent on issues related to tertiary entry, including a visit to a university to familiarise students with academic life and culture.
- During another session past students come to a class and discuss their experiences, usually as a panel discussion with students drawn from three to five different institutions. Also, the structure of a degree, and words associated with it (such as: major, minor, subject, course etc.) are explained.
- When the book is finished, we provide students with 2 other theories or ways of looking at the same content. They then have to use all three positions in their final essay.

It is only at this point that we feel confident they will be able to handle first-year tertiary study. By this time we have also slowly introduced all the conventions such as footnoting and bibliography.

Robin McCormack, Geraldine Pancini

November, 1990

How to use this manual

The manual consists of two sections:

A Course Guide
Five Session Guides

Course Guide

In the **Course Guide** we have tried to explain the ideas behind the introductory five-session course on *Learning to learn*.

It is here that we describe:

- the reasons we developed this curriculum
- the main ideas that underpin the sessions
- the teaching strategies devised for this program

Like each of the session guides, the course guide concludes with a one-page *Reflections Sheet* designed to help you confirm your understandings of the ideas, and assist you to develop your own repertoire of anecdotes, examples and reflections about learning. We think this is an important or even essential step towards being able to *personalise* the ideas and *convey them with conviction* during the sessions.

Session Guides

Each of the five **Session Guides** provides a variety of resources to assist you to teach a 3-hour session. These include detailed lesson plans, class handouts, and background notes on the concepts and strategies.

Anecdote boxes

Anecdotes about learning to learn have also been included throughout the manual, set off in boxes like this one. They are drawn from past and present students at Footscray, from teachers who know the program, and from the experiences of the Footscray writers and teachers.

They are intended as both a way of supporting or illustrating the ideas, and as a bank of examples for your own teaching — in other words, *to assist you as a learner, and then as a teacher.*

Many teachers have reported that the ideas behind the course have helped them to understand their own experiences as learners, which is the best possible preparation for assisting others to do the same.

Quote boxes

Quotes are drawn from evaluation sheets, letters, and other contributions by participants in the Footscray program.

We suggest the following approach:

First reading

1 Begin by reading the **course guide** straight through.

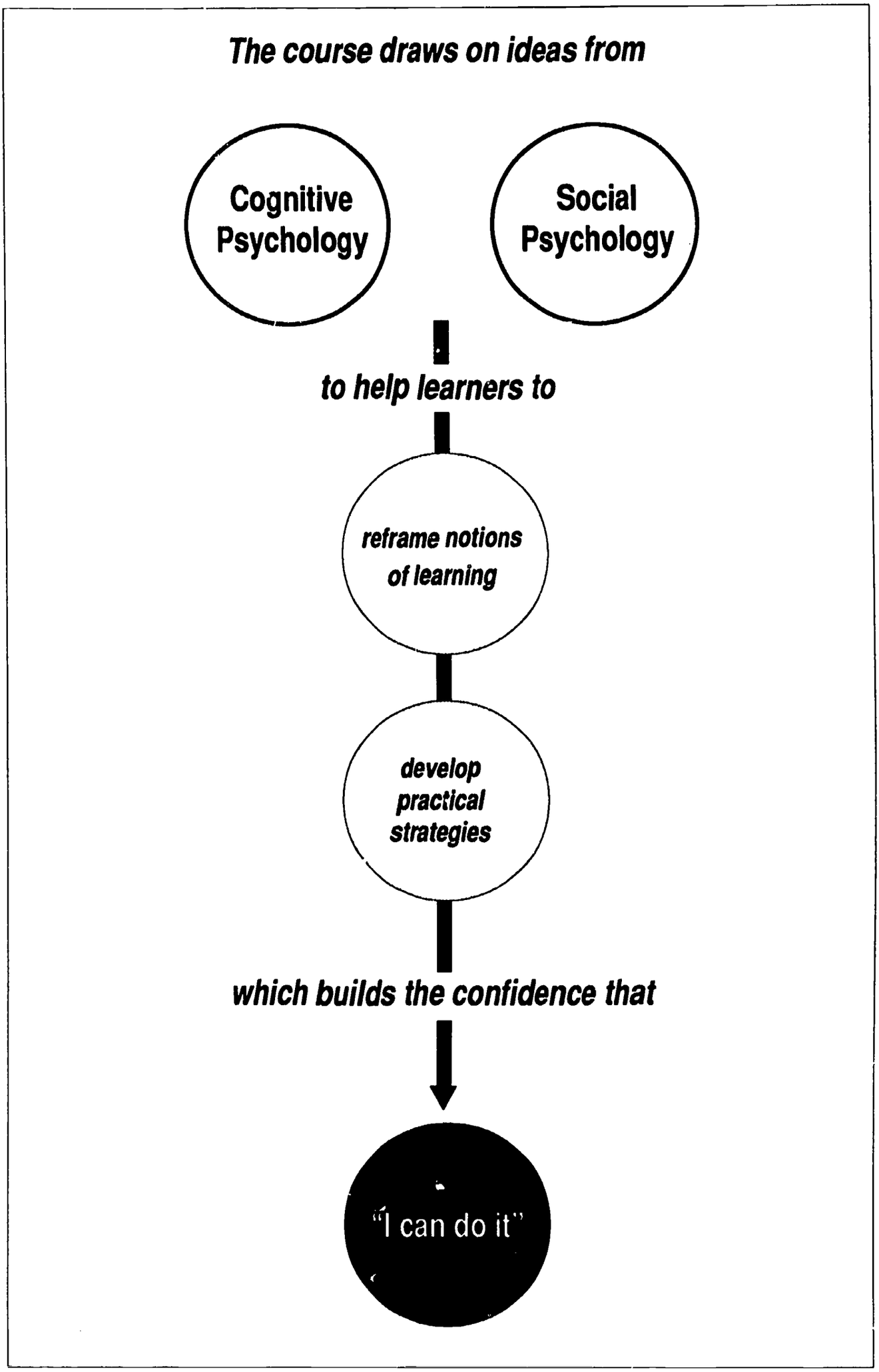
2 Then look through the **sessions guides** for a general picture of the course structure, and read the Background Notes.

A closer look

3 Return to the **course guide** to review the main ideas for the course

4 Read each **session guide** in detail when you are ready to prepare or adapt your own teaching program.

It's a good idea to record your own reactions and reflections as you go through the manual. We've left plenty of space in the margins for your notes.


The course draws on ideas from
Cognitive Psychology
Social Psychology
to help learners to
reframe notions of learning
develop practical strategies
which builds the confidence that
"I can do it"

Why use a new approach? 1

Why use a new approach?

Current explanations of learning

- Traditional approach
- Intelligence model
- Sociological approach
- Self-esteem approach

A new approach to learning

- Cognitive psychology

Current explanations of learning

As a broad statement we could say there are four main approaches to explaining academic success and failure:

Will power

The first approach is embodied in the day-to-day interaction of school classrooms and centres on the notion of how much effort students put into their work. This is expressed in such phrases as:

"Good work, but you must try harder"
or
"Get on with your work."

Intelligence

The second approach comes from mainstream psychology and focuses on the idea of intelligence which is treated as mainly a genetic endowment. This is expressed in such sayings as:

"She has always been slow "
or
"He doesn't have what it takes."

Environment

The third approach comes from sociology and explains scholastic failure in terms of the fit between a student's family culture and the school culture — middle class students find that schools complement their home culture, while students from disadvantaged groups experience a conflict between their lives at home and their lives at school.

Personal problems

The fourth approach explains failure as low self-esteem, lack of assertiveness, or personal problems.

However, we have found all four approaches unhelpful in assisting adults return to study.

The traditional approach

The first account focuses on *trying hard* and gives the impression that if you just made a bit more effort then you would get there. But this leads to adults trying to study for longer and longer hours with less and less efficiency, until inevitably they drop out.

In most schools the framing of study skills and habits is saturated with moralising. Typically, this focuses on two ideas — the notion of a good student, and the notion of trying hard.

Good students

Good students are students who *do what they are told*. The idea is that a teacher sets various tasks, and if you do them you are a good student and you will, as a result, learn what you are supposed to learn.

Trying hard

Hand in hand with this notion of a good student is the idea of trying hard. What the idea of trying hard implies is that there is no ambiguity about what you should do — just do what the teacher tells you. Your only problem is to "make yourself do it". For example, if a teacher says, "Read from page one to page thirty", all that students have to do is somehow to focus their eyes on the black marks on pages 1–30.

There is usually no talk about how to read, what reading is, different types of reading, what to do when you keep falling asleep, what to do about bits you can't understand, and so on. All you have to do is *read it* — as if reading was just a simple, obvious thing.

Process or performance?

Inevitably, this approach focuses on public, objective performances (such as short answer tests or multiple-choice questions) which both teacher and student can agree have been enacted — or not. Unfortunately, focusing on public criteria can easily lead to a focus on busy work.

The more private procedural matters (matters of process, matters of how you went about it) seem too ephemeral, too private, too diverse to figure in the accounting systems of public assessment. How can you give "marks" for the different ways of coping with tiredness?

This means that the definition of the task tends to be mechanical and external. According to this approach, the only psychological techniques students should take responsibility for are techniques of will-power. These are the ways you motivate yourself to make sure that you do actually sit at your desk and complete the assigned task.

Adult students

This framing of the student-teacher relation, where the teacher says what must be done and students use their will-power to try to do it, is quite inappropriate for adults.

Adults tend to be *over-conscientious*. They do not need to be moralised at — they have returned to education voluntarily, and can drop out any time they wish. Adults are already prone to scruples and perfectionism.

Nor is doing what the teacher tells them their only responsibility in life. The major responsibility of adults is not to do what their teachers tell them, but to

- earn a living
- maintain family relationships and routines
- help their children, etc.

In fact, many adults who re-enter education feel guilty about taking up study again. To study is in fact to divert time and attention away from the central moral responsibilities in adult life — your family and work. To spend time studying or going to class seems a selfish thing to do. In fact, many women chose it in opposition to their main moral responsibilities.

This is just for me — I'm doing this just for myself. The rest of my life is lived in relation to others. This is going to be for me, my self-indulgence.

So, a notion of learning that is framed in terms of inculcating a technology of self-control and will-power in students so that they force themselves to do things they find repugnant is quite misplaced when dealing with adults.

Finding time

The traditional approach also implies that the more time you spend on your work, the better it will become. But adults already have lots of demands on their attention, time and energies. For busy adults to find an extra 20 minutes to 1 hour in the day on top of a weekly class of 3 hours is difficult.

Finding this time is an act of major ethical significance for family life.

Finding this time is an act of major ethical significance for family life because it disrupts long-established patterns. Demanding the time, place, quiet and freedom from interruption necessary for studying places severe restraints on the spontaneous patterns of interaction with other family members — children, partners and friends. The psychic and physical withdrawal necessary for this study is easily read as rejection, aloofness or reneging on taken-for-granted roles, responsibilities and relationships.

The intelligence model

The second account, based on the concept of intelligence, is saturated with biological determinism and leads students to think it is all out of their control — "All I can do is see if I have enough brains or not. If I haven't, then I will drop out."

This approach is based on the idea of genetic inheritance. It has been a ruling idea in traditional psychology as well as in the common experiences of those who breed sheep, cattle, dogs, horses or pigeons for particular characteristics.

- *In terms of learning*, this approach interprets the cultural and cognitive attributes of knowledge and understanding as basically the same as physiological attributes, such as eye colour and height.
- *Politically*, this view has functioned as a rationalisation of social inequality by claiming that the social distribution of wealth mirrors the distribution of intelligence: those at the top of a society are the brainiest, while those at the bottom are the dumbest.
- *Educationally*, this approach has been used to stream children from an early age into those destined for professional careers and those destined for manual work.

Limits to learning?

In terms of students returning to study, this view is insidious because it means that whenever students find themselves faced with something difficult, they begin to wonder whether they have reached their limit and should drop out.

Our view is that any ordinary adult can successfully do tertiary study if shown what is involved and how to do things. Tertiary education should not be viewed as only available to a small elite. We feel that we have demonstrated conclusively over the years that almost any adult, regardless of their previous schooling, can succeed at tertiary study. In short, the point at which the average adult runs into the so-called "genetic limits" of their learning capacity is far beyond tertiary education.

Any ordinary adult can successfully do tertiary study if shown what is involved.

Intelligence is how you do things

We reframe the idea of *intelligence* so that it is not a genetic attribute but the way you go about doing things. You do things intelligently or stupidly. Intelligence is used as an adverb, not a noun. Instead of worrying about whether you have enough intelligence or brains, you should worry about whether you are studying intelligently.

Intelligence is like caring.

We do not ask,

"How much care did you inherit"?

nor should we ask,

"How much intelligence did you inherit"?

Intelligence is a quality of the way you do something: just as you can do things carefully, you can also do them intelligently — or, in our terms, *metacognitively*.

Explaining past failure

If you reframe intelligence as a quality of actions — the way you do something — you can account for past scholastic failure in a way that is not humiliating or demoralising.

What you can say is that those who failed were intelligently doing something other than academic learning. Their mind was on other things: they were attending to, focused on other things. And you only learn about "what's on your mind", what you think about, worry about, muse about, daydream about, puzzle over. Your students may have been:

- intelligently preparing for entry to the workforce
- intelligently learning about relationships
- intelligently avoiding school-work

  or even

- intelligently engaged in a power struggle with their teachers.

So, by specifically rejecting the concept of intelligence as a quota, students can begin to move towards a more active concept of learning.

Whilst the assertion that adults tend to be over-conscientious — that they do not need to be moralised at, that they have returned to education voluntarily (and can drop out anytime they wish) — is generally true, I find that it overlooks a facet of adult students' response to study, one which I've grappled with as an adult student.

Adults are reasonably vulnerable to the demoralisation that has ... dogged their study habits and personal attitudes in the past ... I found myself as an adult returning to senior secondary school study quite often beset by *attitudinal* crises where, from somewhere within me, I felt as though I was in fact a no-good student and occasionally saw myself as actually sub-intelligent! All of which was, I feel, a continuum of my earlier disillusionment with the student/school model you describe.

My point here is that such "junior" attitudes are often very durable in a person's self-image framework and there is no really neat cut-off between adolescence and adulthood in practice.

What do you think?

– student teacher

The sociological approach

The third or sociological account is also deterministic, but because it is based on dividing society into groupings or classes, it clashes with students' sense of themselves as individuals. We have found that it is only much later, after doing a lot of sociology, that this account can begin to make sense.

For many teachers it might seem that a sociological account of school failure is the obvious account to give. You might think that such an account would also appeal to students by mobilising their sense of having been treated unjustly. However, even though most students can take on board the systematic skewing of IQ tests, they find it difficult to accept a systematic skewing of the whole education system itself.

We are not sure why this is. It may be that:

- they do not think of social systems as the outcome of social forces, but as neutral arbitrations of individual effort
- they do not want to believe a deterministic doctrine when themselves just embarking on a new venture
- the use of such notions as *the working class* means that one has to have already developed a sense of self that is not completely crushed by the term.

To name something is always in some sense to stand over against it. It is hard to name something unless you can to some extent distance yourself from it.

A few years ago, a woman — we'll call her Mary — had dropped out of first year university and joined the course. In the first session, when we were talking about intelligence, Mary began to fill the class in on the "real reasons" they had failed — reasons she had learnt in a first year educational sociology class.

She said that the Western suburbs were where the working class lived, that they had poorer educational facilities and teachers who didn't believe that their students could learn. Our students responded quite angrily, insisting that they had had very good teachers, that their schools were nice places, etc. They were very defensive.

We quickly side-tracked this debate so that it could re-emerge much later in the course after we had studied some sociology.

Certainly, for people just embarking on study, such a perspective seems deterministic, fatalistic and depressing.

One thing adults returning to study value above all else is an ethos of optimism and hope, a sense that their current move can make a difference. To be told that the game is rigged before you even get a chance to play is deeply depressing. It would be like deciding to have a child even though holding a deeply pessimistic view of parenthood as an institution.

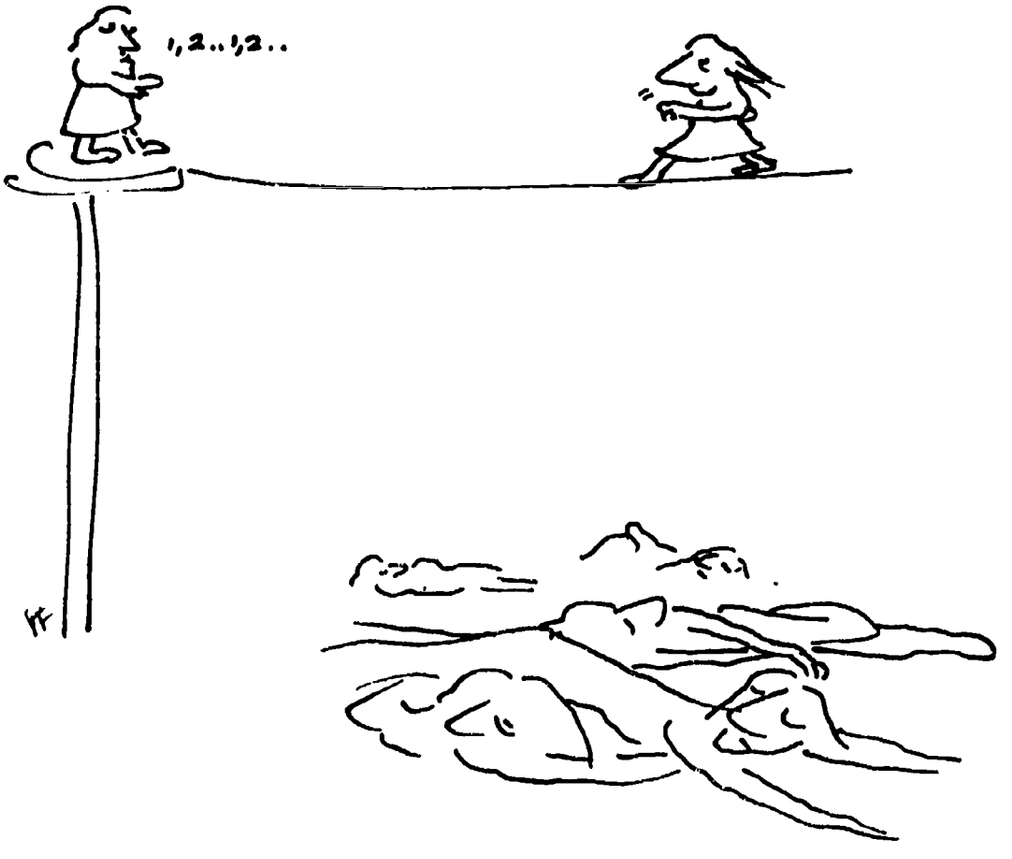
Our attitude is to respect the sense of hope that inevitably accompanies any major new life commitment such as returning to study.

Individual action

The other problem with framing educational failure in sociological terms is that the only effective action which can arise from such an approach is large-scale social or political action. There seems to be nothing individuals can do to improve their own individual learning. Yet early in the process of returning to education, it is precisely this individual learning that is at issue. The focus of concern is:

Have I got what it takes?
Can I cope?
Will I succeed?

What students need is a framework from which they can derive immediately useful procedures, principles and habits.



The self-esteem approach

This brings us to the fourth and final approach to learning. In many return to study courses and support services there is a focus on the idea of self-esteem.

This view concentrates on the fact that students who are having trouble invariably have a poor self-image and this reinforces their failure. But, rather than work directly on student self-esteem or assertion skills, we have found that these naturally develop as students learn. To be able to say things like: "I have learned the skills of writing a good essay" or "I've learned how to be a more efficient reader" or "I don't quite understand this yet, but I know how to go about finding out more about this topic" in itself seems to help people feel more positive. It means they have active strategies to assist them when the going gets rough.

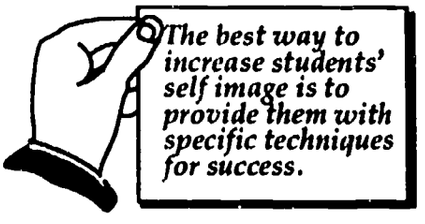
Techniques

The problem with focusing specifically on self-esteem is that it does not really focus directly on the main issue: the tricks of the trade. Our experience is that the best way to increase students' self-image is to provide them with specific techniques for success so that they know they are succeeding. We have found our students gain in self-confidence to such an extent that many of them find themselves being promoted at work or going for new jobs, even though we have not specifically focused on self-esteem itself. This is quite apart from their changed attitude to study.

Coping

And personal problems? There are times when problems in our private lives are so overwhelming that it is difficult to concentrate on something like study. During these times it is probably best to stop and continue in a less hectic time.

However, for most adults, most of the time, life is full of stress. The stress of birth, death, divorce, a child starting school, a child doing VCE, a child starting university, a sick child, partner, or parent — these things never happen conveniently in a single year so that they are all over and done with. Being an adult means that we are continually having to deal with such issues. However, the more in control we are of different aspects of our complicated lives, the less a problem in one area can infringe on the rest.

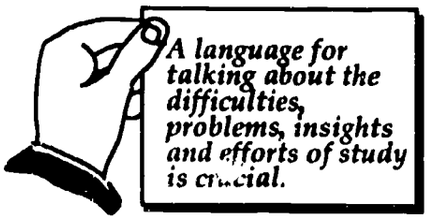


In other words, the more we can streamline the time and energy put into study, the less all the other inevitable real-life dramas will affect our resolve to continue our studies.

None of the available explanations of success and failure, then, helps adult students returning to study. A useful explanation requires a different approach — a new model of learning.

A new approach to learning

It is important to provide a framework which names or labels the processes of learning.



Without ways for talking about what is happening when you learn, the whole business remains a mystery — something you cannot really know or control. Thus, a language for talking about the difficulties, problems, insights and efforts of study is crucial. Even fairly crude concepts can help students get a handle on what they are doing or can do. They help students replace a vague sense of anxiety with a sense of being in control.

Study skills

One of the flaws in progressivism was to think that study should just be a matter of intuitive enthusiasm for the subject — "internal motivation". However, this is a mistake. There are many procedural decisions that are not solved simply by enthusiasm or self-esteem — decisions concerning:

- when and how to take notes
- when and how to revise
- when to start and stop reading
- when to start writing, and so on.

Students need a framework for making these decisions — and will instinctively cobble together a set of "hand-me-down" maxims, if not provided with one.

Providing a map

To refuse to name or label the processes of learning — to insist that process and procedures remain tacit — is to sell students short. On the other hand, to insist on a rigid theorisation of the psychological processes of learning in terms of so-called "behaviours" is equally wrong.

What is needed is simply an initial mapping of the territory, a mapping that can be corroborated, amended and added to by later experience. The main purpose of this course is simply to draw attention to processes of learning as matters needing attention, concern and organisation; and a precondition for this conscious monitoring is some sort of naming.

What students need is a theory about learning that is enlarging not constricting, hopeful not fatalistic, a theory that can extend both insight and control. They need a framework to help them orient, organise, pace and monitor their efforts at learning, a framework different from the one given them as children.

This means that we must find a new framing to help students with the *how, when, where, and why* of study.

It is for this reason we turned to cognitive psychology.

Cognitive psychology

Cognitive psychology is a development within psychology over the last 20 or so years which has abandoned the behaviourist notion that all ideas are just passive reflections of what we perceive or experience. Cognitive psychology has been interested in trying to construct a picture of how our mind actively processes experience: how the mind controls and influences what we can see or what we can know and what we remember.

For our purposes there are three main ideas we draw from cognitive psychology:

Metacognition

- The **first** idea we draw from cognitive psychology is the idea of metacognition. Metacognition is the idea that we can reflect on our own learning. Being metacognitive means being aware of, monitoring and controlling how we approach new ideas and new skills. Being metacognitive means that we do not have to be just passive victims of our habits or past experience — we can control how we go about our learning.

Short and long term memory

- The **second** is that the mind is divided into two systems: a short-term memory system which handles our current experience, and a long-term memory system which handles our past experience.

Schemas

- The **third** is the idea that both the way we experience things and which things we remember depend on how they are organised — schemas. A schema is what we would normally think of as a concept. We can have a schema (or concept) of a restaurant, a family, of socialism, of a university, of how to read a book, and so on. How we view things, what things we expect to go with what, what things we notice, and what things we remember, are all a matter of what schemas we have. And different people can have different schemas of the same thing: my schema of a university may be different from yours.

We use cognitive psychology because it provides a non-moralising framework for handling decisions, strategies and tactics about learning and studying. In a sense it doesn't matter to us whether the concepts we expound, the stories we tell, the findings we cite are true or not. It is not their truth-value that is of interest — it is their power to set up a framework for handling the strategic and tactical decisions of studying and learning. It is important to be clear about this.

This is not a course about the psychology of learning; rather, it uses some concepts from cognitive psychology to re-frame and re-orient habitual attitudes to learning.

Reframing attitudes

So, the focus is not on the reality or truth of what is being talked about, but on their use-value as sign-posts, maxims, and anecdotes for shaping study habits. It also helps students think about their current venture not just in terms of

"This time I will try harder"

but

"This time I will do this rationally"

So, even though we use ideas about learning, the mind, the brain, etc., this is only so that students can acquire new procedures, habits and attitudes — *know how*, not *know that*. We want students to draw practical

implications from the ideas presented, and so we only include things that can help practically.

Experiencing academic theory

Another advantage of explicitly explaining some cognitive psychology to students returning to study is that right at the beginning of their course they get a taste of the way academic ideas can map onto their personal experience. So, although it might seem odd to begin by introducing abstract ideas, these connect up with their own experiences of learning. In this way they can get a feel for the way academic knowledge maps onto common sense knowledge — the way it sometimes supports what you already knew, sometimes undermines it, sometimes extends it, and sometimes adds completely new elements.

They also experience the way abstract concepts can make new sense of things; bring together things that seemed unconnected; explain things that seemed either mysterious or normal; open up new ways of thinking and acting. They also learn not to be afraid of technical terms or jargon. Because the ideas from cognitive psychology in some ways corroborate their personal experience and in other ways undermine it, they also learn to "suspend disbelief". Thus, they learn to trust theory and take a punt that new theoretical ideas will also eventually make sense too.

I finally made it to the class and had hoped to find a seat in an inconspicuous corner of the room, but, to my dismay, we were shepherded into the kitchen to have a cup of tea or coffee as the room was not yet vacant. Nobody spoke to me at first — I drank my tea in silence and then I met a much younger girl who asked me why I was doing the course and said she wished her own mother would come along and get involved in something like it.

I felt a bit more confident for having got someone's approval, and when we got into the classroom Geri and Rob — our teachers — told us a little about themselves and how they came to be teaching a return to study course. They seemed very approachable even though they were "people with degrees". They didn't ask any awkward questions, they just explained what the course covered, and then Rob proceeded to draw a diagram of one's brain on the blackboard and tried to convince us we were all capable of learning no matter what had been imposed on us as children.

I was more than a bit sceptical about this bit of information at first. Having been brought up in a society where people were constantly evaluated by their background and the "type" of family they came from , I had very fixed ideas as to the level of performance to expect from myself and from those I knew. Completely forgetting what I had learned at my assertion course, I argued with myself along these lines ... didn't people's lives reflect the kind of intelligence they had? Hadn't I always been taught that if you used your brains and "pulled up your socks" you were bound to be successful in life? — the extent of the success being measured, more often than not, by the amount of brains one had to use rather than by the effort put into "pulling up socks".

In looking back I now realise that overcoming the barrier of thinking we inherit our intelligence from our parents and that each of us is left, as a result, with a certain amount of learning ability or lack of it, was one of the most rewarding things that has happened to me.

– former Footscray student

Why do I fail?

Traditional answers ...

"Because you're dumb ... "

you were born with no brains

you don't work hard enough

you're not assertive enough

you come from the wrong social class

What we say ...

"Because you're not metacognitive enough. You need to know ... "

how to help your memory do its job

what the main ideas are

what to read for

how to write essays

what they want in an essay

... and so on ...

What are the main ideas? 2

The main ideas

Metacognition

- Monitoring the self
- What to monitor

Cue consciousness

- Monitoring the system
- Looking for structures

Monitoring the self

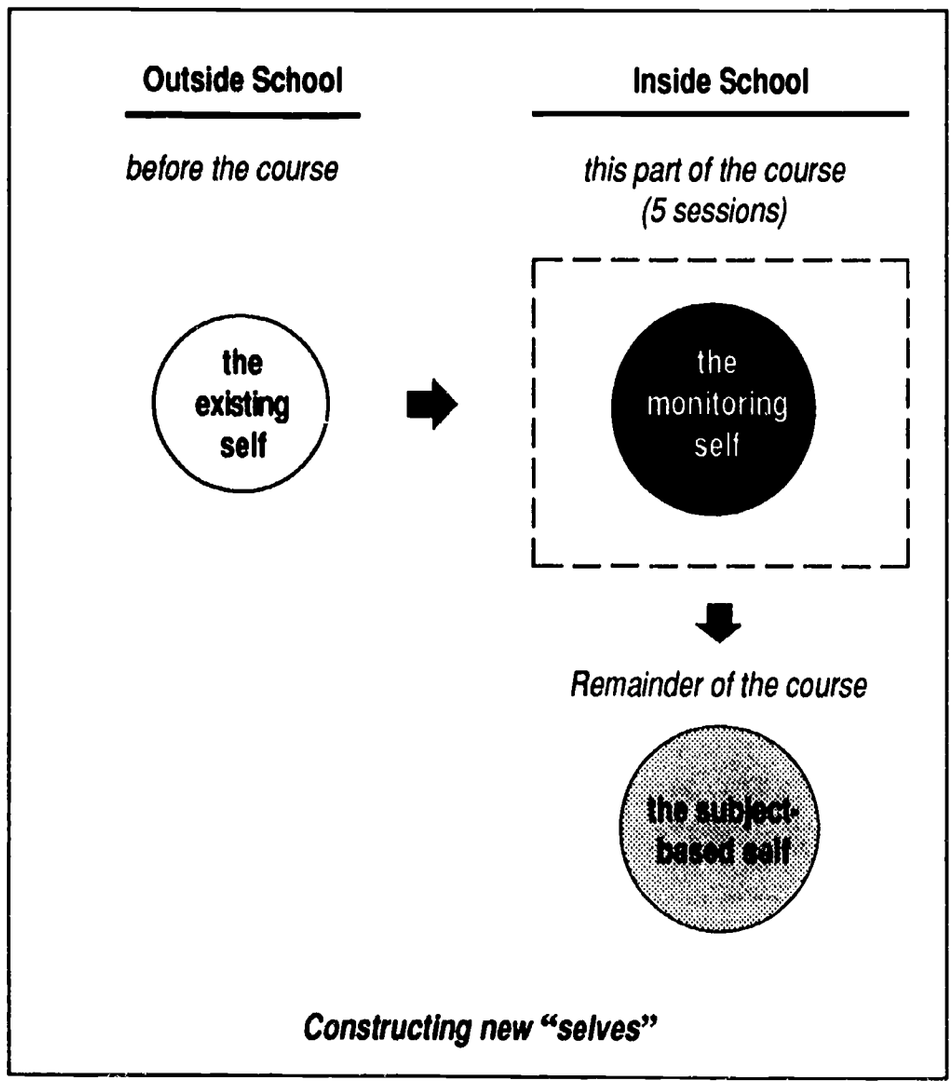
One way of describing this course is that it helps students construct a metacognitive self, a self which monitors and controls the processes of learning.

Metacognition is the idea that we can reflect on and monitor our own learning strategies. Being metacognitive means that we become aware of and responsible for the way we approach new ideas and new skills. Being metacognitive means that we do not have to be just passive victims of our past habits or experiences — we can take control of the way we go about learning.

This **metacognitive self** will differ from the sense of self already possessed by students — their *everyday self*. It will also differ from the *subject-based self* formed later by reading, writing and discussion within a particular discipline.

The **everyday self** (or selves) that students already possess outside the educational context is based on the relationships and skills they have acquired through their relations with families and friends.

The **subject-based self** is the self that develops as we become more and more competent in a particular subject and thus learn to think and act like a mathematician, a historian, a literary critic, a sociologist or electrician.



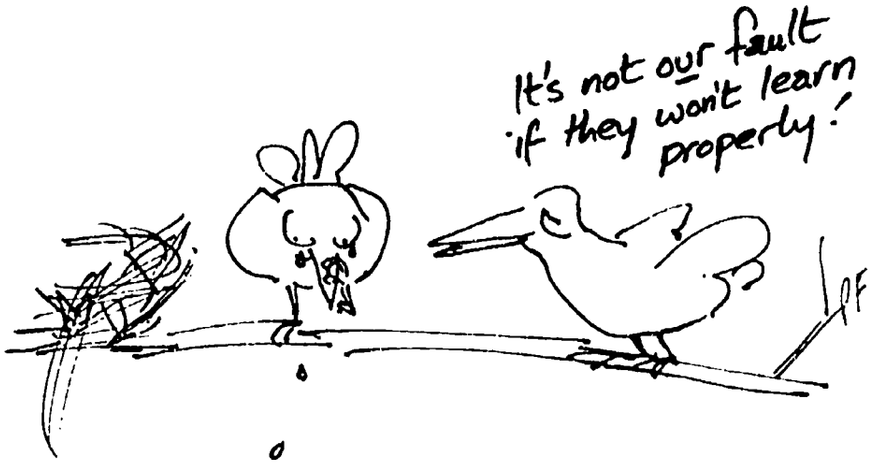
Teacher's role

These early sessions put in place another self, a monitoring self which assumes responsibility for the success of learning.

However, this self-monitoring and responsibility for one's own learning should not be instituted in such a way that it can be perceived as an abdication of teacher responsibility. In fact, at the very same time that it is instituted there should be assurances that:

- failure to learn is a failure of teaching
- it is the job of teachers to find, formulate or invent ways of teaching to ensure successful learning.

This double message is important because *students still need to rely on the teaching of teachers*. Constructing metacognitive students does not mean that teachers can abdicate from their responsibility for student learning. We are definitely not advocating the idea: "If you don't learn anything, that is your fault, not mine."



What to monitor

The domain over which metacognitive monitoring ranges should develop in step with the development in students' concept of knowledge and learning.

One of the aims of this course is gradually to redefine students' interpretation of what knowledge is.

Students can only monitor what they can see a point in monitoring. This means that what students monitor depends on what they think they should be learning — but their interpretation of learning depends on what they think knowledge is. One of the aims of this course is gradually to redefine students' interpretation of what knowledge is.

Knowledge as remembering facts

At the beginning of the course, most students think that knowledge consists of discrete facts and so they think *learning is memorising important facts*.

This view of academic knowledge usually reaches back to childhood memories of memorising isolated facts in

- history
- geography
- linguistics (spelling)
- mathematics (multiplication tables)

To fit in with this view of knowledge, we initially formulate metacognition in terms of memory, as *ways and means to enhance memory*.

Knowledge as understanding concepts

Students must come to see statements or facts as instances or examples of more abstract concepts.

Eventually students must come to see statements or facts not as isolated items to be put to memory, but as *instances or examples* of more abstract concepts or processes. Eventually the facts recede in importance, being treated as simply a medium for teaching, learning and explaining theories and concepts. Although in post-graduate research the focus may shift back to an emphasis on accurately delineating the particulars, in undergraduate work particular facts are used mainly as a medium for illustrating and exemplifying theories, concepts and principles.

Focusing on an encyclopaedic knowledge of detailed facts (typical of self-taught learners) is irrelevant, and in fact an obstacle to grasping the centrality of concepts and theories.

Monitoring study

Metacognition is then expanded to include:

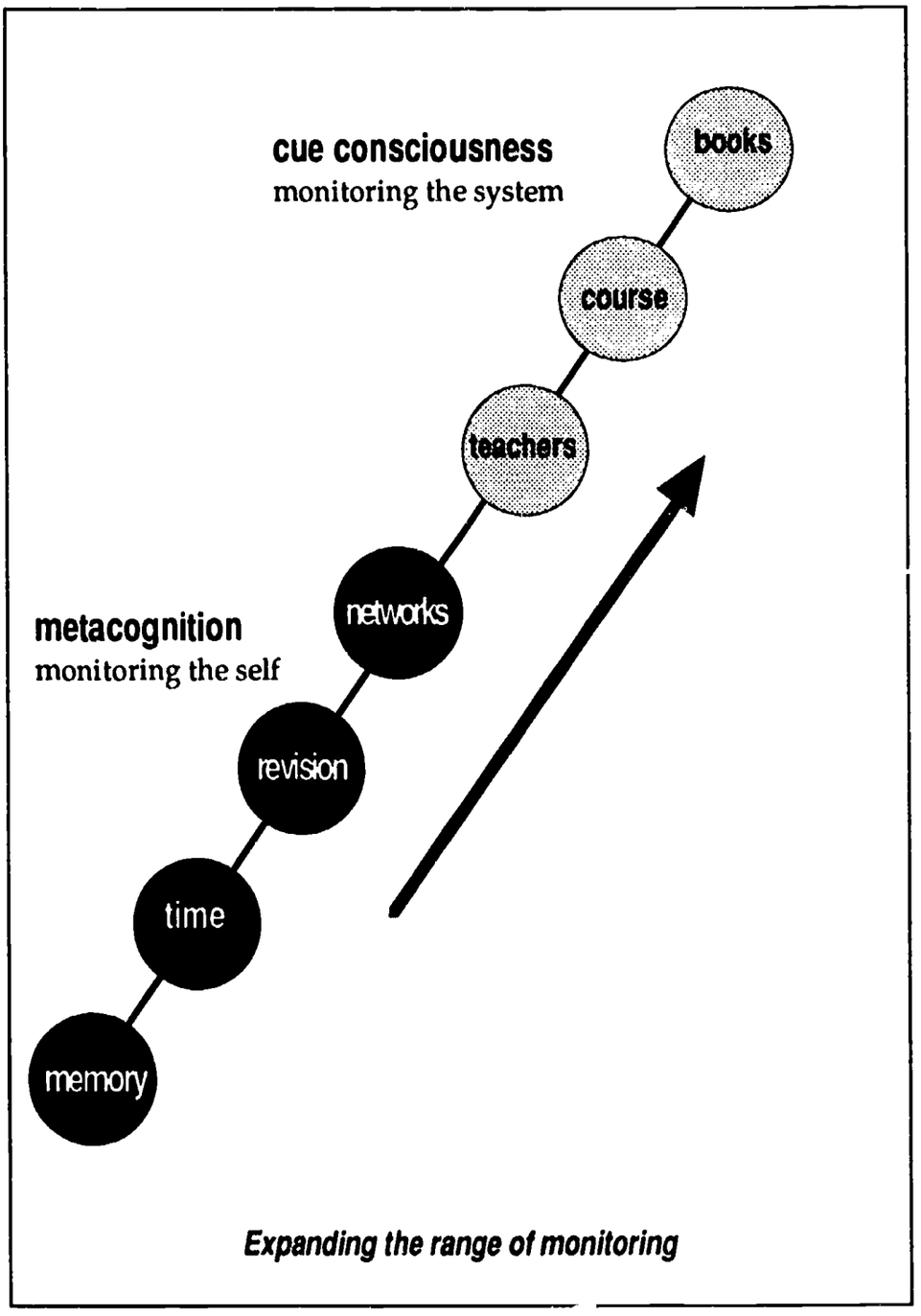
- *ways and means of finding regular time for study*, and monitoring the effects of these choices both on oneself and on others affected by these choices
- *responsibility for revising and checking whether you have understood*

Later metacognition is redefined again to include

- *maintaining a network of other students* to make sure that unexpected contingencies (such as sick children or car problems) do not mean that you have no idea what happened in the missed class, and also for maintaining morale during the emotional ups and downs necessarily involved in any major challenge such as returning to study.

Later still, metacognition gets translated into cue consciousness which means:

- *taking responsibility for identifying the main threads of a curriculum.*



Expanding the range of monitoring

Cue consciousness

Monitoring the system

Participation in the academic discourse community is much more than just knowing things.

Monitoring a new culture

The academic community consists of a whole range of

- social relationships
- practices, habits, routines, rhythms
- institutional expectations
- procedures

Traditionally, these seemingly peripheral aspects of study are passed on from mentor to disciple, or are the focus of coffee bar gossip sessions between students, or are picked up osmotically, simply by being within educational institutions so long.

Students coming back into academic settings need to be alerted to this procedural knowledge.

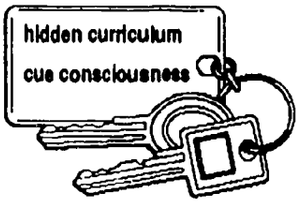
However, students coming back into academic settings after a long absence need to be alerted to this procedural knowledge, knowledge which is the stock-in-trade common sense of members of the academic community.

Monitoring the teacher

Having established metacognition as a process of monitoring one's mind through conscious organisation and revision, we then extend its domain of responsibility to include the relationship between student and teacher. Whereas the traditional framing of teacher-student relation posits the teacher as active, and the student passively receptive, we re-frame this relation so that the student is equally active, equally exercising judgement.

We do this through two notions:

- the concept of *hidden* (as opposed to *overt*) *curriculum*
- the notion of *cue consciousness*.



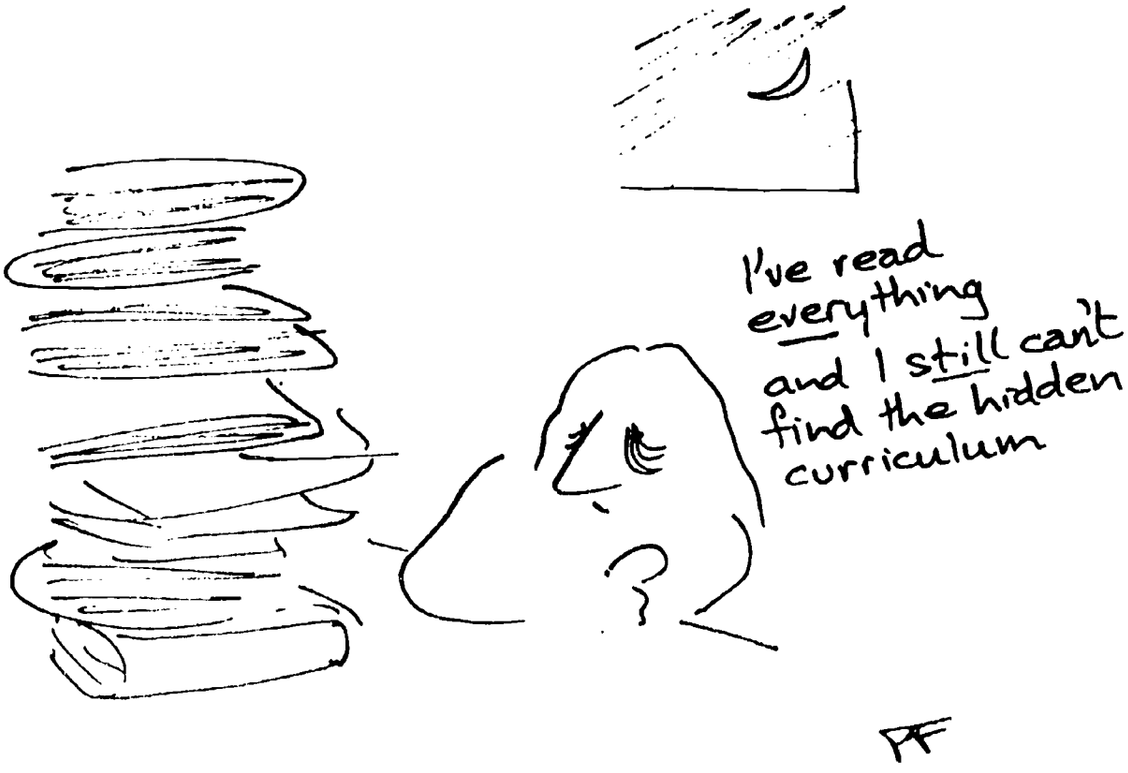
The hidden curriculum

The notion of the hidden curriculum points to the fact that there is a gap between what "on paper" students have to do and what "in fact" they have to do.

Teachers always ask students to do far more than they really need to do. Teachers do this to make sure that students really have got on to what they need to learn. But, as a rule, it is a physical impossibility to really do every single thing teachers say to do. Most students guiltily take short-cuts and hope they won't get caught out.

By openly distinguishing between the overt curriculum (what teachers say to do) and the hidden curriculum (what you really have to do), students are placed in a double bind. It means that to obediently do everything the teacher says is to be a bad student. It means that taking short-cuts, concentrating on some things at the expense of others, in short, disobeying the teacher, is crucial to successful study.

It also means that students are condemned to exercise judgement. They cannot play safe; they have to take a punt.



Looking for structures

The notion of cue consciousness focuses students on the need to judge relative importance. Importance is not what grabs their interest, or makes sense given their own personal background. Rather, it is *what the teacher thinks is most important* or significant, a significance which is signalled or *cued* —

- in reading guides and course descriptions
- the relative marks assigned to exams, assignments etc.
- teacher overviews at the beginning or end of classes
- gestural cues such as repeating things, writing on the board, enumerating points (*3 points, 1st ... 2nd ... 3rd ...*)
- speaking slowly as a cue to students to take notes word for word
- body language showing enthusiasm, interest, etc.

Permission to notice cues

Cue consciousness gives students permission to attend to many more messages than simply the literal up-front speech of teachers. We give them permission, force them, to ask:

What is this course really about?
What are the main points, concepts, theories, texts, and authors I have to get onto?
What do the teachers think? What is their view?
What are they trying to teach us?

Monitoring the main ideas

To be alert to cues means actively monitoring much more of the classroom process. It means speculating and hypothesising about the teachers' goals, purposes and motives — not as everyday people ("I think he's a bit of a womaniser"), which is what adults can easily focus on — but as professional, goal-oriented educators. It means searching for consistency, but often encountering inconsistency —

- between lecturer and tutors
- between one course and another
- between utterances by the same teacher on different occasions.

Often it means accepting that teachers are inconsistent, unclear, or arbitrary. Even this dawning confrontation with the fallible human face of "Knowledge", sometimes in the form of incompetence, is an important lesson — despite its frustrations.

Playing the game?

Cue consciousness means that students learn to trade observations about courses, lecturers, and tutors; about what they say; about how to interpret them; about whether they corroborate or conflict with one another. And, especially when there is inconsistency between teachers, they can speculate on the intentions and purposes of the course as a whole. And they can do this without having to feel guilty or as if they are betraying their teachers.

This sort of reflection ... has always been part of the stock-in-trade of good students.

Although this might seem like cynical "game playing", this sort of reflection and gossip has always been part of the stock-in-trade of good students. Nor need it be cynical. In fact, such reflection leads to deeper insight into the discipline itself, and ultimately into the sense that the

discipline itself possesses a reality over and beyond the frailty and inconsistency of its teachers.

Structures for learning

The underlying thread ... is the notion that knowledge and ideas are organised.

The underlying thread holding these early sessions together is the notion that knowledge and ideas *are organised*:

- **new ideas** are organised into chunks in our short term memory
- **memories** in our long term memories are organised as schemas
- **ideas** need to be integrated into our existing schemas for efficient remembering
- **revision** need to be organised if it is to reinforce the process of schematising new ideas
- **lectures** are organised like written texts with beginnings, transitions and ends
- **theories** are organised in competition with one another within separate disciplines
- **libraries** are organised according to the Dewey system
- **universities** are organised as hierarchical distributors of Knowledge
- **books** themselves are organised by text-structures

and finally

- **student essays** are organised by learnable conventions of writing

We could sum up the domain of metacognition by saying that its real task is to "suss out" structure.

How do I teach the course? 3

How do I teach the course?

Organising the class

- Teaching styles
- Teaching formats

Explaining the ideas

- Making these ideas your own
- Finding stories to tell

Building student networks

- Missing classes
- Dropping out
- Networks

Organising the class

Our view is that different styles of teaching should be called upon at will depending on what you are trying to achieve.

Teaching styles

Most teachers develop a style of teaching that favours one form of classroom organisation over others. This may be deliberate or it may be an unconscious development. Sometimes teachers simply repeat the classroom organisation they were taught by as children, while others consciously reject the styles they experienced as students.

We believe that you should not feel that you have to be chummy and non-assertive all the time, but nor does that mean you are never that. Similarly, you should not feel that you should be the authoritative teacher all the time, but nor does that mean that you never are.

Our view is that you should vary the stance and social positioning you take up in the class depending on your particular goals. To get locked into a position where you feel you can never use *chalk and talk* because that is "authoritarian traditionalism", or you can never use *group work* or classroom discussion because that is "slack laissez faire progressivism", seems to us to be limiting the possibilities in your classroom.

Seating arrangements

Which particular teaching style you are going to employ for a specific segment has to be decided beforehand, because the arrangement of seating and tables must fit with the teaching style you have decided on. Otherwise you can end up with a seating arrangement that is working against what you are trying to do. Sometimes teachers are not careful to set up the seating arrangement before a class; they just accept the table arrangement left over from the previous class. We are very careful to always rearrange the tables and chairs to the format we want.

In this course we use a range of classroom styles each with their own organisation of the space in the room. This means that the desks or tables usually have to be moved at least once during a class.

In the ***Session guides*** we have included a logo indicating our suggestions for the best format to use for each particular segment:

Small group format for discussions and activities

Teacher-led formats

Symbols for seating arrangements

Although experienced teachers are well aware of the importance of spatial layout and its impact on the social relations in a classroom, many inexperienced teachers do not fully realise that the arrangement of tables in a room can be absolutely crucial for the success of a class, especially with adults returning to study.

Adult students

One thing we have noticed over and over again is that adults returning to study are not sure whether they can, for example, change position in a room. They are unsure about what they "have permission" to do during a session.

We have had situations of students sitting at a table with their backs to a blackboard. When the discussion focuses on a diagram on the board, they do not feel they have the right to turn their chairs around to face the board.

Instead, they will either stretch their necks around, or if they are really shy, may not even have the courage to turn around at all — they will just sit facing away from the focus of discussion.

This is not stupidity: it is unfamiliarity with the ground-rules of a huge unfamiliar institution. It would be like going to a cathedral and finding that you are behind a pillar — what do you do? Would you insist on dragging the pew out into the aisle so that you could see? If the choir is singing, would you sit backwards on the seat with your legs through the back of the pew so you can look at them? Well, our students are in a comparable situation. They do not know the protocol. They feel like visitors; they do not know what is acceptable and what is not.

So, if you intended to talk from the front for 30 minutes or so, it would be disastrous to allow the chairs to be placed around the tables because many students would be facing the back of the room. Our experience is that students tend to sit in the chairs wherever they are arranged when they come into the room. So, make sure they are already arranged in the way you want them for the first segment of your class.

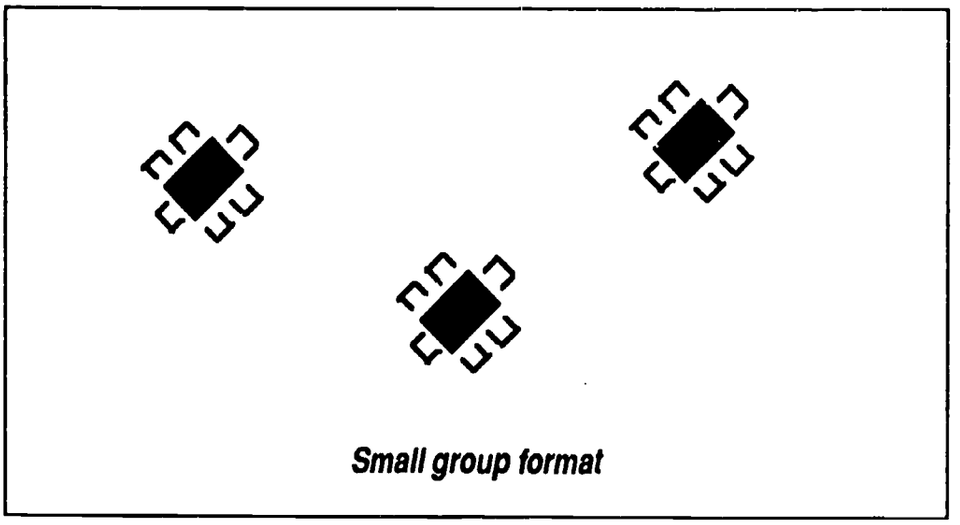
Teaching formats

We tend to shift between these three teaching formats:

- a small group format
- a teacher-focused format
- a circular, whole-class format

Small group format

This format is based on arranging the room as a scatter of tables with 3–5 people seated around each table:



Small group format

This is a layout we use regularly — in fact, it is the very first format we use with a new group.

Advantages of small groups

Clustering in small groups means:

- students can learn to give voice to their ideas and concerns within a more intimate and controlled environment
- students can get to know and bond with a few other students very quickly and so feel that they are not a stranger in a class of other strangers
- they only have to remember a few names at first, rather than being faced with trying to remember the names of lots of people in the "round robin" of students giving their name and having to talk about themselves, which typically makes up the first session of many courses.

What is talked about in these group discussions is not controlled by the teacher in any way. But nor do they have to discuss things in a vacuum. These discussions are always guided by a prompt-sheet with a set of questions and a listing of possible responses as a guide to the topics and direction the discussion should take, even though this is not intended to be followed rigidly.

Speaking out

Students in group discussions must not feel that they are under teacher surveillance. We sometimes leave the room or focus on other things to distance ourselves from what is going on the classroom to make the point that students are talking to one another; that we are not trying to

listen or overhear what is being said. Only in the security of this context can students learn to articulate the contradictory demands and pressures on their lives without feeling that they have to pretend to be "good students" — that is, unrealistic students.

It is in these settings that students can learn to say:

I don't understand ...
What is ... ?
I couldn't find the time to do any homework this last week.
My husband was in a bad mood all week because of all the time I am spending on my study.
I couldn't understand what the teacher was talking about at all just before.

Nurturing metacognition

This fairly safe and intimate swapping of impressions, responses and feelings is absolutely crucial for nurturing the development of metacognition. These discussions about learning processes model the sorts of inner dialogue that students must eventually evolve as private metacognitive reflections about what is required and what to do.

In these groups students learn

- to take control of their learning — learn to be metacognitive
- to monitor their progress, assess how they are going
- to figure out what they understand and what is still vague
- to articulate and give voice to what is happening in their personal lives as a result of returning to study.

They can do all this realistically in discussion with others in the same situation. They discover that they are not the only ones with home pressures; not the only ones who feel incompetent; not the only ones who worry about whether they are understanding; and so on. By giving voice to these anxieties with others, they are not at the mercy of their inner feelings and can make more realistic assessments. They gradually learn to acknowledge but not be dominated by their inner feelings of incompetence or fear of failure, and come to accept that they are learning and can make progress.

Sometimes we also use this time to circulate among the tables to get to know students individually and be able to respond to specific queries, requests or comments. This means that these can be dealt with without imposing on the whole class.

One or two comments from observations where this small group format is used at Unis.

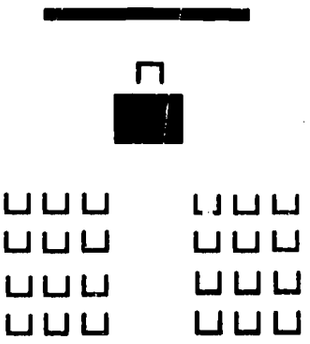
It can tend to lead to recurring formations of "friend" groups which can restrict on-task concentration, and second, it can lead loners to do the rounds without settling into developing an involvement with others in learning.

Some teachers I have seen prompt students to "mix more" for this reason.

— former Footscray student

Teacher-focused format

A teacher-focused presentation is what is colloquially known as "talk and chalk". It is a seating arrangement in which students sit in rows facing a blackboard or overhead projection screen:



Teacher-focused format

Introducing concepts

Early in the course we tend to alternate between small group discussions and teacher-focused presentations.

Explicit teacher presentation is the best way to introduce a new concept or explain a new skill.

We find that explicit teacher presentation is the best way to introduce a new concept or explain a new skill, in a way that presupposes minimal prior knowledge. We do not expect students to already know any of the concepts we introduce. So, we do not pretend "to draw out" from students through questioning or discussion the concepts we wish them to learn.

Again, our view is that any approach that expects students to speak up in front of a whole class favours the more confident or those with more appropriate life experiences. We try to teach in such a way that even the most shy person from the most sheltered experience can still feel that they are understanding and learning.

We take the view that those who already know something should be prepared to sit patiently and wait while it is explained to those who don't know. Introducing new material *through class discussion* inevitably means that those who know will dominate and drown out those who don't. So, we don't encourage lengthy debate about the ideas introduced in these early sessions. What we are about is helping those who don't know, without their being intimidated by the presence of other students who do already know.

How do you actually do this? What are some of the strategies you use?

— ALBE teacher

This of course is a very delicate matter and teachers have their own ways of handling these situations. Generally you will find one, perhaps two students in each class who you quickly realise will dominate the whole class if you are not careful. Whereas most students are very shy at first, these students are the opposite. The way we try to handle this is to very

quickly establish some ground rules. For example, these students will want to illustrate anything you say by telling long and detailed stories from their own life that often have very little relevance for the rest of the class. What we do is let them respond in this way twice, but the third time they try to speak up we simply say with a laugh, "You have had your say for now; what about someone else saying something. Would anybody else like to say something?". Chopping off a dominant student like this **before** they start to speak is much better than letting them start and then trying to stop them mid-flow.

We then make sure we speak to students like this during the coffee break and explain that we do not mean to be rude but that although they are obviously more confident and have lots to contribute, we want everyone to get a chance to speak. That is, we try to make it clear that we accept and are pleased that they are more articulate than the rest of the class but we want them to help us draw out the other students. What we have found is that these students simply want recognition for their knowledge and experience. They do not consider themselves "dumb" just because they are in the class. We try to confirm that we do not perceive them as dumb and precisely because they do have more education or experience than others in the class we want them to help us help the rest of the class. We then make sure that we set aside time after classes to explore things in a more depth with these students so that they don't feel frustrated. We have found this strategy works well. Once their abilities have been recognised these students tend to be very supportive class members and chip in with valuable contributions.

Any approach that expects students to speak up in front of a whole class favours the more confident.

To say a little more about these students. Our experience is that they are adults who are very competent and understand lots of things but have found that they cannot satisfy the requirements of formal education. As a rule they have come up against a brick wall with their writing, and so have failed even when they knew that they understood the course content. It is this discrepancy between their (accurate) assessment of their understandings and abilities, and their actual performance that frustrates them. And it is this frustration that drives them to dominate the air-waves of the classroom. They know they are not dumb, but they can't show it where it counts — in the exams or in essays. Once they have been shown how to write essays these students usually become top students.

Another strategy we use is to acknowledge that there is more that could be said on a particular point and that they are right to want to say it but that we will come back to it another time later in the course. We only say this, of course, if it is true that we will return to it later.

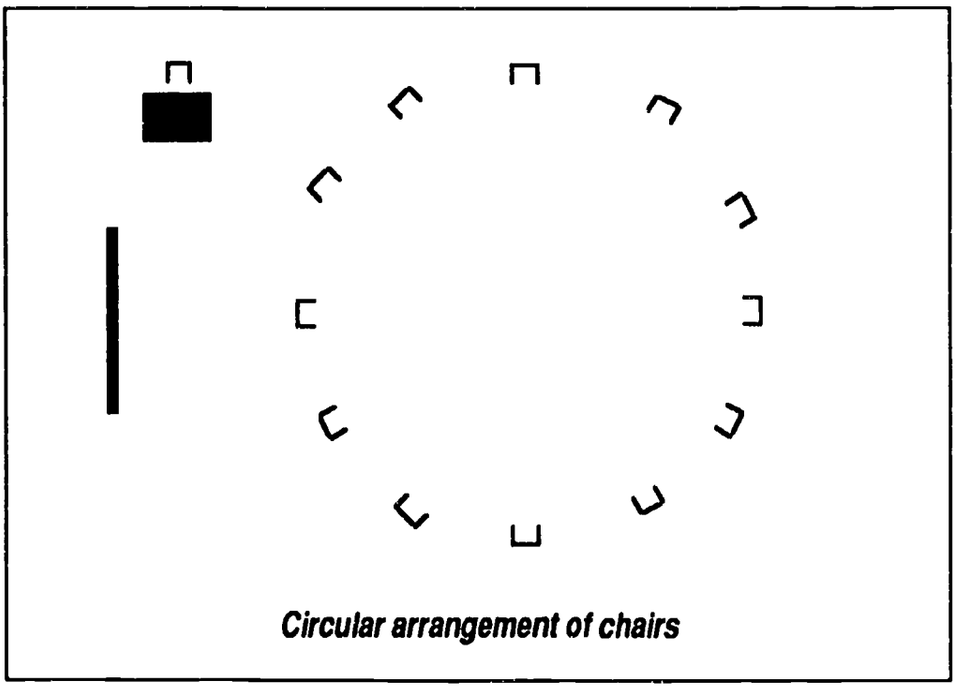
Student expectations

Another reason for using teacher-directed presentations is that this is congruent both with adults' memories of education and with their notion of what learning is when they first re-enter education. So, although eventually they will come to feel comfortable with other ways of structuring learning, we feel that it is best to be very directed early on.

This also means that the course can make a lot of progress quickly which gives students a real sense of progress and growth. Too much discussion and debate will be perceived by many students as just aimless waffle,

Circular format

A circular arrangement means arranging all the chairs in a circle so that everyone can see everyone else and everyone can participate:



Circular arrangement of chairs

This is a very popular format with progressive teachers and community workers. They feel uncomfortable using a teacher-focused format which they associate with traditional authoritarian teaching. They interpret the teacher-focused format as denying the equal worth of all students and as implying that the teacher is the only one who knows. These teachers will insist on a circular arrangement from the very first class as a way of giving everyone equal importance.

Equality

However, our experience is that this circular format secretly carries its own forms of inequality:

- Especially early in a course, it is inevitable that some students are more confident about speaking publicly than others: they "know the game" from previous courses, or have had lots of experience and confirmation about the worth of their ideas from other work or community contexts.
- Although the circular arrangement seems to give an equal right to speak to the shy and unconfident, they in fact feel exposed and on trial.

This circular format secretly carries its own forms of inequality.

Everyone can see them at all times, and they feel under constant surveillance by the teacher and all the rest of the class. If a shy person is asked to speak — say, for example, to introduce themselves — they are so embarrassed that they usually can't attend to anything that precedes their having to speak, or anything after. In fact, they despise this public display and feel under pressure to contribute in an eloquent, fluent manner. They think what they have to say is never as good as someone else, and resent being forced to show it.

Surely you can think of a time when you've been asked to introduce yourself and say why you're here or what your interests are? Did you feel put on the spot? Did you blurt something out just to get it over with?

Students can see through the game of pretending "we're all equal".

In discussing this with students, they can see through the game of pretending "we're all equal". They know that the teachers know more than them — and teachers know that they know more than students. Either the teacher controls people's contributions so that the confident don't dominate, or it will be the more confident or aggressive students who control the class. In theory, it is an egalitarian format, but in practice the teacher must be in control.

So, this is a format we use very sparingly and only later in a course.

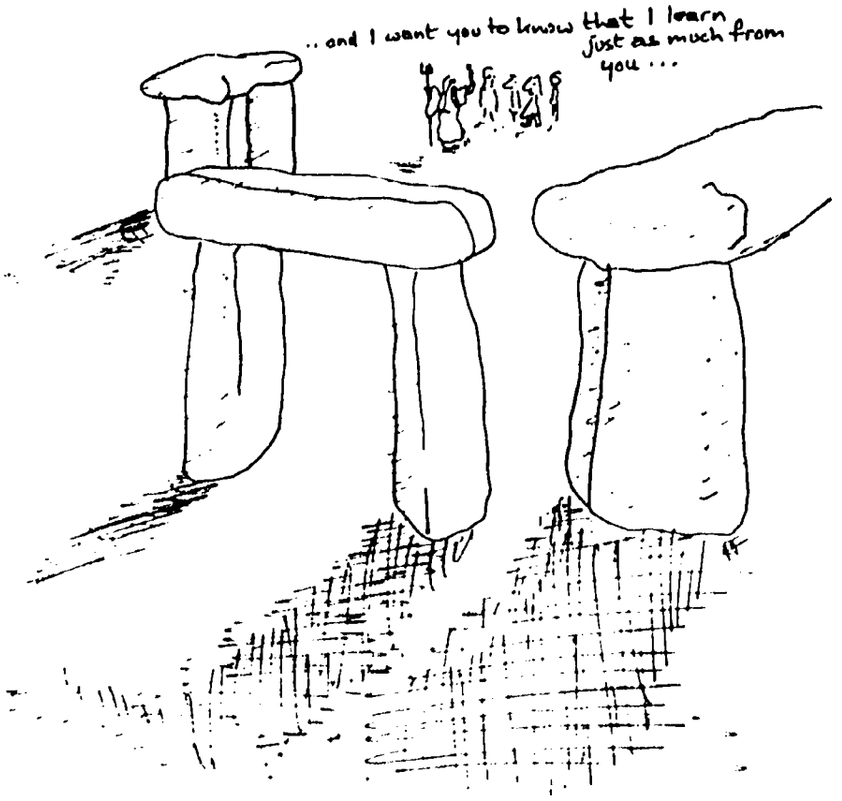
We would not use the circular format for at least 10 weeks into a course, when everyone is feeling comfortable and fairly confident.

An after-thought ...

If you have a very small class — say 6–8 students — then the difference between these seating formats will be negligible. In fact there will be a natural tendency for the circle to be the only format.

So, there is a relationship between numbers in your class and the formats you can adopt. For example, it is almost impossible to give a coherent 30 minute presentation to 4 people. The intimacy of such a small group subverts the lecture format.

We try to run fairly large classes so that we can exploit the contrast between the different formats and their corresponding mood or tone. In fact we prefer to team-teach with classes of 30+. Team-teaching is also a way of improving your teaching skills.



Explaining the ideas

Making these ideas your own

Your own experience

For most teachers the ideas in this course will be new. However, they are not difficult to get onto, nor controversial. In our experience most teachers find the ideas here merely articulate understandings they already possess and do not radically challenge any ideas they already have.

However, you may not be familiar with specific ideas — such as short and long term memory systems, or split brain theory — and can feel uncomfortable explaining these ideas to students. Although we have tried to give short and clear explanations of the ideas and concepts, we have concentrated more on translating them into everyday ideas that are usable by students in modifying their attitudes and experience of learning.

Further reading

If you feel uncomfortable speaking on behalf of these theoretical ideas from the cognitive sciences, the list of Further Reading contains some very easily-read books to give some more scientific and experimental background. It would be worthwhile browsing a couple of these so that you feel that you do have a bit of a feel for the area.

However, what needs emphasising is that these ideas are not presented to the students in their own right. The details or exact truth of the differences between the two hemispheres of the brain, for example, does not matter to us. What does matter is that it can provide a reason, explanation, or justification for students adopting a more active and self-monitoring approach to their learning. And in our experience over 10 years of teaching these ideas, we have found that this is the way that students use them — that is, they interpret the ideas as practical, not as really about how the brain actually does work.

Practical ideas

Every one of the theoretical ideas is immediately transformed into a practice:

- **metacognition** (initially) becomes **monitoring short-term memory**
- **chunking** means **finding the main ideas**
- **schemas** means **revising**
- **cue consciousness** means **attending to cues**

So, although each idea is at first expounded theoretically, it is quickly changed into a practical procedure and this is its final form.

Finding stories to tell

There are many ways of explaining a new idea. One way is to explain it scientifically in terms of other scientific ideas. However, an alternative way is to map it onto our everyday experience.

Although we do use the first method, it is this second form of explanation that ultimately has the most effect. It is more important to be able to tell some stories or anecdotes about your own experiences of studying and to find some everyday analogies and metaphors, than to be able to give an accurate account of ideas within cognitive psychology or neurology.

It is more important to be able to tell some stories ... to find some everyday analogies.

Anecdotes

The course should not be presented in a heavy-handed way. There should be both humour and everyday illustrations of things.

Although we have included the odd personal anecdote, you will have to find your own illustrative stories. Retelling someone else's story is never very convincing. And everyone who has ever studied or learnt or failed to learn has lots of stories to tell about learning. You should tell anecdotes about —

when "the penny dropped"
how you misunderstood things
when you went about things in the wrong way
how you/someone dropped out of a course because ...
how you/someone succeeded because ...
discovering by accident a more efficient way of studying.

You can also tell many stories about friends and fellow students. The only thing that must be guarded against is the suggestion that some "have it" and some don't. The point of all the stories must be that although successful learning might seem to be mysterious and out of our control, in fact it consists of very learnable and practical procedures. Successful learning consists of understanding what the organising ideas, issues, concerns, and skills of a particular subject are, and then developing efficient ways to come to grips with them.

Using recollections

Actually, teaching this course provides a context for thinking about our own history as students and learners. Every single one of us has "unfinished business" regarding learning. We each have a history of courses, ideas or books that we couldn't get onto, gave up on, or side-stepped. Normally we just put them behind us by saying "it was stupid anyway" or "I just can't learn languages" or "the lectures was so boring". But it is precisely a re-exploration of these memories that helps us think again about what learning is and how we can go about it. It is this legacy of failure we each carry that enables us empathise with new learners and to articulate the difficulties and traps in learning to learn.

Many puzzles and vague resentments simmering from our own past as students start to make sense and become intelligible. For most of us studying was a mystery. We just developed a few strategies and hung onto them. We were not at all reflective; if an essay got a good mark, we just repeated it.

Many teachers who have sat in this course have told us that they can now understand what went on when they did their university studies years earlier; in fact, many decide to go back and do some more study because this time they can do it knowingly.

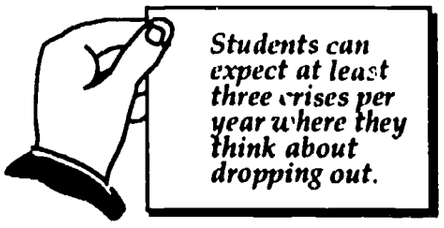
Building student networks

Being a part-time student can be very lonely and isolating. It is not uncommon to do a course and never make the kind of connections with other students that can help your studies. It takes a lot of confidence to say to someone you sit next to,

"Why don't we meet and go over this together"?

or

"I can't make next week's session, could you pick up the hand-outs for me"?



Unlike full-time students, part-time students cannot "run into" other students in the library or cafeteria and discuss ideas or problems. Nor can they just drop into your office on the off-chance that you might be available.

However, an even worse problem is that it is absolutely inevitable that every single student will be forced to miss the odd class because of sickness or whatever. Our experience suggests that all mature-aged students can expect at least three major crises per year during which they seriously think of dropping out.

Missing classes

Let's say you, as a part-time student, miss a class ...

You need to know both the assigned work for the next week and to have some idea of what happened in the class you missed.

Scenario 1

What do you do?

You could ring the teacher and ask. But we all know the hitches with this one. Even though you pick up the phone a few times, you hang up before anyone answers, because you feel you're just bothering your teacher and you don't really deserve his or her time.

Anyway, you are too embarrassed to say why you missed the class because you're unsure whether your reason for missing is a legitimate reason: you were just too tired to cope. But nor do you want to tell a lie.

Scenario 2

What do you do?

This scenario is the same as the first, except that the reason you didn't get to class is too personal and embarrassing to talk about.

Your husband got really angry because you are always out, or the car was not available and you were too scared to travel on public transport at night.

Scenario 3

What do you do?

You are confident enough to ring your teacher; in fact you think it's your right. No problem here. However, every time you ring, no-one answers, or the person you want is at a meeting or teaching a class, or doesn't work on Tuesdays etc.

The week rushes by and even though you have tried, even left messages, somehow you haven't connected. When the class rolls around the next week, you debate with yourself whether there's any point in going, since you won't have any idea what's going on.

Scenario 4

What do you do?

Like most part-time adult students, you rush to class, fly in from your paid or unpaid work, hassle to find a car park, and run up the stairs thinking, "I hope I'm not too late tonight".

When the class finishes, you have to rush off to feed kids, or take them off your neighbour or sister who is, after all, helping you out, but since this is a weekly commitment you don't want to overstep the relationship.

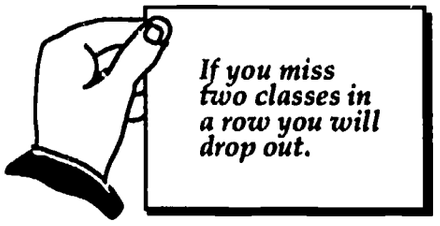
Or maybe you are paying for childcare so you really don't want to be any longer than necessary. Yet, you really wanted to take up an invitation from a small group who seem to wander off together for a coffee afterwards.

Scenario 5

What do you do?

You are doing your reading or an assignment and feel out of your depth. It seems too difficult and you can't even formulate what the problem is. It just seems to make your head spin.

You need someone to talk to, but your family has no idea what you are talking about. In fact, they are threatened by the new ideas and big words you are using. So, there is no-one in your current social circle you can approach.



Dropping out

Missing one class is bad enough, but the real crunch comes deciding whether to turn up to the next class after you have missed one. The rule of thumb we confront students with in the very first session is:

If you miss two classes in a row you will drop out.

What tends to happen is:

1 You are forced to miss a class because of illness one week.

2 The next week you are still trying to catch up from the chaos caused by the illness, and as the day of the class gets closer and closer, you keep going over in your head:
"Will I go or won't I?"

3 You still haven't recovered fully from the illness; you missed the homework; everyone around you seems to be demanding more attention than usual.

4 At the very last minute, even though you are all dressed ready to go, you impulsively decide not to go.

You rationalise the decision not to go by saying:

- *"I was falling behind anyway"*
- *"Everyone else seemed to understand better than me"*
- *"Anyway, I would be too embarrassed to go back now"*
- *"No-one will remember me and I have forgotten people's names"*
- *"They probably all know one another by now while I know no-one"*
- *"Perhaps I should do an easier course"*
- *"Really, I should wait and try again when my youngest child is in prep"*
- *"I think maybe I am just dumb"*
- *"I don't know why: I just don't have the motivation".*

Networks

With each of these situations, a list of two or three students' names and phone numbers make it possible to operate outside the teacher/class structure.

Students' names and phone numbers make it possible to operate outside the teacher/class structure.

From the first session, we use the small group discussion to encourage people to get to know one another, so that within a few weeks they will feel confident to exchange phone numbers with several other students. This means that if they miss a session, there's someone to contact, someone to collect handouts, perhaps someone to meet with to discuss what they've missed, and most importantly someone to talk to about the studying and how you feel about it.

Now, while it seems that this could happen naturally, and often it does (particularly if you take regular coffee breaks in which students can get to know one another), it's better to speed it along early in a course.

These support-groups help adults, especially the shy and unconfident, to hang in ...

- when things get rough, and you think maybe you should quit while you're ahead, or before you make a fool of yourself
- when you're sick and you think it's time to quit
- when your partner is putting on pressure, claiming you're too stressed and really should slow down — which means quit
- when you think you're the only one cutting corners with family or work-related duties — which means quit

In other words, a network of other students you can ring, or meet with outside the set class time is important.

I see that you have taken up the issue of the "shy" student, by way of a prescribed network technique — names, phone numbers, etc.

This must surely aid actual communication amongst students!

— student teacher

How to set up a student network

While scheduling a regular break in each session so that students can get together is a good idea, it is not enough.

Publicly encouraging students to form support-groups is more than just saying "let's be friendly and nice to each other" — it is an essential strategy for successful study. Anyone who has not formed a friendship or working relationship in the first few weeks is almost certain to drop out when the going gets tough.

This places study as a co-operative venture rather than an isolated one. It's important that the initiative for this comes from you because students are often confused about the boundary between co-operation and what they think you might classify as "cheating". They need your encouragement and sanction to feel they're not really doing something that's cheating. To do something related to the course without the teacher's permission seems sneaky, especially if you swap ideas about

Anyone who has not formed a friendship in the first few weeks is almost certain to drop out.

the course — or exchange library books. Surely this gives you an unfair advantage; surely this is cheating.

Such co-operation is more that just socialising — it often makes a real difference in terms of effective coping strategies.

Steps to take

1 During the first session mention that in a few weeks' time, you hope that students will have meet and feel confident to give their phone number to several other students in the class. Usually the small group discussion is a good time to bring this up.

2 Each week, during group discussions, or just before a class break, remind students that eventually you would like them to be familiar with a few others to form a network.

3 By about the third or fourth week, have the students exchange names and numbers with several others. It's a good idea to get a copy of each group yourself. If a student is away, you might ask someone in the network to perhaps phone, or collect any handouts for them, etc.

An after-thought ...

It is now very common for our students to send along a cassette tape-recorder if they have to miss a class.

We regularly teach with 2 or 3 recorders in front of us. You quickly get used to stopping mid-sentence to turn the tape over and learning to draw diagrams on the board silently so that you do not speak with you back to the microphones.

In fact many students who attend the class also tape it, so they can listen to it again at home.

Coffee breaks

Taking fairly lengthy coffee breaks is an important feature of the course.

Coffee breaks are the main way that part-time students can make friends with other students and learn to talk about how study is affecting them and their lives. Many students have not mixed much outside a fairly restricted circle of family and friends, so coffee breaks are a way of meeting others who are attempting the same tasks as yourself, experiencing the same fears, and facing the same problems.

It is also a place to learn to talk with teachers.

This completes the introduction to the course.

Further reading

Notes on the selection

You will notice that these different avenues of research all centre on the way *our view of learning* affects how we study and what we learn. That is, they focus on the way that our view of what we are doing influences both what we do and the way we do it.

So, although in one sense you could say that they study the process of learning rather than the product of learning, it would be more accurate to say that they study how our views of what we are doing affect the process of doing it — and hence the outcome.

For example, if we think that knowledge is made up of isolated facts and formulas then we will think that we should rote-learn these.

However, if we think that knowledge consists of theories and concepts, we will concentrate on trying to understand how the theories and concepts relate to one another.

Cognitive psychology

Cognitive psychology developed at the same time as computers were being developed. Initially it used a "telephone exchange" metaphor for how the mind works, in just the way computers operate.

In recent years there has been more awareness that humans do not process meaning in the same way that computers do. As well as handling isolated "bits" of information analytically, humans can process *patterns of meaning*.

There are lots of paperback popularisations of cognitive psychology on the market.

One way to get an interesting and readable introduction to developments within cognitive psychology as it relates to learning is to read Jerome Bruner. He has a special talent for writing about abstract ideas in a readable and accessible way. His autobiography is especially accessible and introduces personal recollections about the main players in the development of cognitive psychology from traditional psychology and the more recent emergence of social psychology.

Bruner, Jerome. *In search of Mind: Essays in Autobiography*, New York, Harper Row, 1983.

Intelligence

The nature-nurture debate is as old as psychology itself. This debate about whether mental skills and understanding are shaped by hereditary factors or environmental factors is part of the on-going competition between the disciplines of psychology and sociology.

For our purposes the more important thing is the way the notion of inherited intelligence was used to set up and justify streaming in the British and Australian school systems so that some students were directed towards high schools from which they would go on to university, while others were directed into technical schools so that they take up apprenticeships (if boys) or unskilled clerical work if they were girls.

We also mention the scandal of Sir Cyril Burt. A world authority on this issue, he diddled his research figures in order to "prove" that intelligence was mainly inherited.

Kamin, Leon. *The science and politics of IQ*, Hillsdale NJ, Erlbaum, 1974

Metacognition

The idea of metacognition developed in cognitive psychology with the idea that there is some executive control going on in our minds. The mind does not just consist of a collection of skills; we have to decide which strategy or skill to employ in a particular situation.

Most of the work in this area has been directed at trying to train students to make conscious metacognitive decisions about what to do, which strategy to employ. So, for example, in reading students will be trained in various skills — asking questions, looking for the summaries, and so on — and then taught to use these strategies deliberately. Most of this work is still at an early stage and exists mainly in journal articles.

Brown, A. L. "Knowing when, where and how to remember: a problem of metacognition" in R. Glaser (ed.), *Advances in instructional psychology*, Hillsdale NJ, Erlbaum, 1978

Brown, A. L. "Metacognitive development and reading", in R.J. Spiro, B.C. Bruce, & W.F. Brewer (eds.), *Theoretical issues in reading comprehension, linguistics, artificial intelligence and education*, Hillsdale NJ, Erlbaum, 1980

Short and long term memory

This distinction was developed by cognitive psychology. Any of the books on cognitive psychology or the psychology of learning include accounts of these two memory systems.

Schemas

The concept of schema in psychology goes back to the work of Bartlett in the 1920s on the way that our memory of things is changed by our current interests and concerns. Memory is not just a photograph or recording of what happened in the past. Our memories are constantly being reshaped as our concerns change. Ultimately the notion of schema derives from the philosopher Kant in the 18th century, who argued against the empiricists who said that all our ideas come from perceiving the world. Kant argued that although the raw materials for our ideas might come from the world, our minds themselves rework these isolated impressions by imposing a schema on them so that they make sense.

Recent work in cognitive psychology has focused on how schemas affect both our perception and our memories. What we notice depends on our schemas and what we remember also depends on our schemas.

Left and right brain

The scientific study of the differences between the left and right hemispheres of the brain has spawned a whole industry of books suggesting that what is wrong with students (or males, or modern society, or schools or western civilization, etc.) is an over-emphasis on the *analytical* approach of the left hemisphere and that this must be redressed by giving equal time to the *intuitive* and global approach of the right hemisphere. These ideas have become almost a religion for many people and bookshops are full of books on how to use the right side of your brain.

Our approach is to mention these ideas to emphasise that diagramming the relationships between ideas (mindmaps) is a highly efficient strategy for revising and an interesting tool for thinking about approaches to study. But we do not think it is the royal road to producing successful students.

Buzan, Tony. *Use both sides of your brain*, New York, Dutton, 1976

Russell, Peter. *The brain book*, London, Routledge & Kegan Paul, 1979

Mindmaps

The term "mindmap" was invented by Tony Buzan. Anything by him is eminently readable and useful. Others have explored the same idea of drawing the relationships between ideas using different labels — concept maps, concept diagrams and so on.

Different conceptions of what knowledge is

Researchers in this field are studying how a student's conception of what knowledge and study are affects how they go about studying, what they do when they study, and what they learn as a result of the way they study.

There are two communities of researchers prominent in this field. One derives from Perry's pioneering research during the 1950s on the evolving views of knowledge and study of Harvard undergraduates. The other derives from the work of Marton in Gottegen. Marton suggests that there is a continuum with two extremes: shallow learning and deep learning. Shallow learning tends to focus on the rote learning of isolated facts. Deep learning concentrates on trying to understand the overall patterns and interconnections of a topic.

Perry, William. *Forms of intellectual and ethical development in the college years*, New York, Holt Rinehart & Winston, 1970

Entwistle, N. J., and Ramsden, P. *Understanding student learning*, London, Croom Helm, 1983

Marton, F., Hounsell, D. J., and Entwistle, N.J. (eds.) *The experience of learning*, Edinburgh, Scottish Academic Press, 1984

Cue consciousness

This concept was developed from the studies of the hidden curriculum. We don't know of any follow-up work on this.

Miller, C.L.M. and Parlett, M. *Up to the mark: a study of the examination game*, London, Society for Research into Higher Education, 1974

The hidden curriculum

The study of the gap between what teachers suggest students should do and what students realistically need to do was carried out by members of the Chicago school of sociologists during the 1950s. Again, we don't know of any recent studies on this.

Snyder, B. R. *The hidden curriculum*, New York, Knopf, 1971

Learning as initiation into a community of ideas and skills

Particularly in England, there has developed a dynamic form of social psychology that views cognitive development not as an inner psychological process but as the internalisation of public communal forms of doing and understanding things. These mental skills are learnt through interaction with other members of the community, especially adults.

Bruner and Donaldson provide very readable introductions to this change of approach. As part of this approach Vygotsky is now being looked at again more carefully as an alternative to Piaget for explaining cognitive growth in children.

Bruner, Jerome. *In search of mind: essays in autobiography*, New York, Harper & Row, 1983

Donaldson, Margaret. *Children's minds*, London, Croom Helm, 1975

Wersch, James V. *Vygotsky and the social formation of mind*, Cambridge MA, Harvard University Press, 1985

Disciplines

Academics are good at studying other people, but they are not so good at studying themselves. There is very little work on the way that knowledge is divided into disciplines. When you talk about this with academics there are plenty of embarrassed grins and giggles — they are all acutely aware of the uneasy truce between different disciplines, but it has to remain unspoken.

The way that knowledge is organised into disciplines or fields is studied in the history and sociology of science, which is not easily accessible.

Probably the most readable accounts of how academic institutions function are the "university novels" written by the British authors Malcolm Bradbury [*Eating people is wrong* (1959), *The history man* (1975)] and David Lodge [*Changing places: a tale of two campuses*, (1975), *Small world: an academic romance* (1984), or *Nice work*, (1988)].

Hudson, Liam. *The cult of the fact: the psychologist's autobiographical critique of his discipline*, New York, Harper & Row, 1978

This is a very readable account of the different disciplines and styles of philosophy and psychology at Oxford and Cambridge in the 1950s.

Reading

The most accessible accounts of reading using the concepts of cognitive psychology (called Psycholinguistics) are by Smith.

Adler, M.J. and Van Doren, C. *How to read a book: the classic guide to intelligent reading*, New York, Simon & Schuster, 1972

Gibson, E.J. and Levin, H. *The psychology of reading*, Cambridge MA, Massachusetts Institute of Technology Press, 1975

Smith, Frank. *Comprehension and learning: a conceptual framework for teachers*, New York, Holt, Rinehart & Winston, 1975

Smith, Frank. *Reading*, Cambridge, Cambridge University Press, 1978

Smith, Frank. *Understanding reading*, New York, Holt Rinehart & Winston, 1970

In recent years there have been two new developments in looking at reading. One is looking at the way a child's conception of what reading is affects the way that they read. This work examines the *meta-linguistic awareness* of children and examines how that affects the way they read and how they learn to read.

The other approach focuses on the *structures of texts*. This approach looks at the way written texts use language in a different way from the way we speak, and at the typical patterns of text structures. This approach means that Smith's prediction is not just a guessing game, but a matter of familiarity with different *genres* and the sort of things that you can expect in them.

Lunzer, E., and Gardner, K. *Learning from the written word*, Edinburgh, Oliver & Boyd, 1984

Taylor, G. *The student's writing guide for the arts and social sciences*, Cambridge, Cambridge University Press, 1989

Several books address reading specifically from a parent's point of view.

Clay, Marie, and Butler, Dorothy. *Reading begins at home*, Heineman, 1979

Nalder, Shirley. *Reading: Australian Parents' Guide*, Sydney, GP Books (with the Australian Reading Association), 1989

Adults returning to study

There has been quite a lot of interest in the effect of returning to study on adults, mainly looking at the impact of study on women. Does it break up their marriages or not?

Only recently has there been a shift to looking at how returning to study affects the views and understandings of adults. The pioneering work in this area is *Women's ways of knowing*, which builds on the work of both Gilligan and Perry. It is an extremely readable account of the different attitudes that women can take towards what they are learning and how they integrate what they learn into their lives. Highly recommended.

Mary Belenky, Blythe Clinchy, Nancy Goldberger, Jill Tarule. *Women's ways of knowing: the development of self, voice, and mind*, New York, Basic Books, 1986

Gilligan, Carol. *In a different voice: psychological theory and women's development*, Harvard University Press, Cambridge MA, 1982

Kelly, Susan. *The prize and the price: the changing world of women returning to study*, Sydney, Methuen Haynes, 1987

Reflections on the Course Guide

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student*

How have you read the Course Guide?

straight through ☐
a fast skim ☐
skipped around ☐
slowly, line by line ☐

Have you marked anything?

yes/ no ☐
How?
underlined ☐
in the margin ☐
fluorescent marker ☐

Which teaching style are you most comfortable with?

Match the comments with an approach to learning:

you are not confident enough	inherited intelligence approach
you need to try harder	self-esteem approach
you have a natural aptitude	sociological approach
academic knowledge is just ruling class culture	school approach

Why did you drop out of your last class, course, in-service etc.

fell behind ☐
too busy ☐
decided it was a waste of time ☐
felt uncomfortable ☐

How could you use this course?

as a front-end to an existing course ☐
as a new course ☐
as a summer school course ☐
as a short supplementary course ☐
just use bits and pieces in your existing teaching ☐

Learning to learn

Overview of the Course

This section of the manual consists of a detailed Session Guide for each of the 5 three-hour sessions of the course.

Each Session Guide lists the key points of the session and provides a sample lesson plan with summary checklists. There is also some more detailed background information on the main ideas for the session, plus teaching notes to suggest ways of presenting the course.

Copies of homework sheets, handouts, and overhead projector slides have been provided.

Here's a brief summary of the course, session by session:

Session 1 **Learning & short term memory**

- Introduces the course, gives students a chance to join a small *discussion group.*
- There is then a teacher presentation on Learning How to Learn which introduces the ideas of *intelligence* and *metacognition* and explains why *short term memory* can easily overload, and describes three strategies for coping with this.
- *Speed copying* are introduced as homework.

Session 2 **Long term memory & revising**

- Begins by *revising* the main ideas from Session 1.
- Followed by small group discussion about the *homework.*
- The teacher then explains how long term memory depends on *schemas.*
- Introduces *mind maps* as a way of note taking and revising.

Session 3 **Teacher cues & academic knowledge**

- Starts with a response sheet on *academic knowledge,* followed by an explanation of *the hidden curriculum* and the use of *cues.*
- It concludes with a teacher presentation on how knowledge is organised into *disciplines* and is always changing.

Session 4 **Libraries & the Dewey system**

- A visit to the Library that does double duty. It is devoted to becoming familiar with libraries but is positioned here to reinforce the idea that the *Dewey System* used in libraries is organised in terms of academic disciplines.

Session 5 **Reading & the structure of books**

- Applies the ideas of short term memory, cues and academic disciplines to *over-viewing* and reading a book.


Learning 1


is there a section on learning how to learn how to learn ?

session 1

Summary

This first session introduces the course, gives students a chance to join a small discussion group, and contains a teacher presentation on *Learning how to learn*. The ideas of intelligence, metacognition and short term memory are introduced. Speed copying is explained and set for homework.

	Read before class	*To take into class*	*Student handouts*
Welcome to the course	**Talk notes .....56** This is an example of the things we cover in our course. They are intended merely as a guide for your welcome	**Your notes .....57** This is a fill-in sheet for you to use as notes for your welcome	
Why am I here?	**Activity guide..... 58** This provides a short explanation and then tells you how to organise this group discussion		***Why am I here?*.....59** This is the handout students use to guide the discussions at their table. Make at least two photocopies per table.
Learning to learn	**Main ideas .....61** Background discussion of the ideas used in the teacher presentation on intelligence, metacognition and short term memory limits. **Talk notes .....75** These are the talk notes we use.	**Your notes .....76** . **OHT : IQ Test .....77** **OHT : IQ Test .....78** The overheads you need to talk about IQ tests	
Set homework	**Speed copying.....79** A discussion of the purpose of Speed Copying. Also read the handout for students, which goes into more detail.		***Speed copying*.....81** This is what students copy from for the first week of their Speed copying. ***Ed. on the cheap* .....84** ***Radio Log*.....85** Homework guides for listening to the radio

Reflections on Session 1

session 1

Lesson plan

3 hour class

Welcome to the course

30 mins

name tags for everyone? (wear yours)
hearing impaired students seated near front

Why am I here?

45 mins

tell students to introduce themselves
check that groups know what to do
wander in & out of room until noise level gets up
circulate to get to know individually, answer questions
let it drift into personal revelations a bit
finish with a very short whole-class discussion
don't let the confident dominate the whole class

Speed copying

Break

Learning how to learn

60 mins

What is intelligence?
Metacognition
Short term memory bottlenecks
chunk big; automate; a bit at a time

Set homework

Speed copying

Education on the cheap

Radio National log

Homework

- **Speed copy for 20 minutes**
- **Listen to radio**

Our talk notes

Welcome to the course

- ## House keeping

  where toilets are

  fees, enrolment etc.

  department phone number

  stationery and texts needed

- ## Background of the course

  why it developed

  special entry schemes

  mature age students do better than continuing students

  VCE not appropriate preparation for tertiary study

  course for people who left school early but read

- ## Why this approach is used

  we try to spell out exactly what you have to do and how to do it

  we don't just say it's wrong — we show how you can make it right

  if you can't do something it's our job to help you do it

  what you have to do is hang in there

  yell out when you are confused or can't do something

- ## Overview of the course

  we do most of the talking in the learning to learn course

  there are 5 sessions (brief outline)

  this course is a preparation for work on reading and writing

  you do more small group work in the later sessions

- ## Outcomes of the course

  preparation for VCE or direct to tertiary study

  how to read and analyse books and articles in the expected way

  how to write essays to tertiary standard

  help with selecting and enrolling in a course for next year

  get to know what you are capable of taking on by the end of the course

- ## Student questions

20–30 mins

Your talk notes

Welcome to the course

- House keeping

- Background of the course

- Why this approach is used

- Overview of the course

- Outcomes of the course

- Student questions

20–30 mins

Activity guide

Why am I here?

45 mins

The very first activity is a set of prompt questions titled, "Why am I here?" for students to discuss with the other students at their table.

This activity helps students settle in and get to know a few other students they can latch onto during coffee breaks. By using prompt questions with suggested answers students do not feel quite so exposed as they do if they have to invent their own questions and answers. It also means that we can frame the sorts of issues we want them to consider. We always insist that students wear their name tag and being by introducing themselves. Otherwise they can be too embarrassed to do this.

At first you will find that people are very shy to speak and speak in whispers in case other tables overhear. They also do not know how loudly they are allowed to speak because they have memories of teachers shouting at them to keep the noise level down. We try to set students at ease by insisting that there is not enough noise in the class. We also self-consciously make it clear that we are not trying to listen in on these conversations and that what they say is not under teacher surveillance. We walk in and out of the room with great purpose and stay out of the room for longer bursts, only appearing at the door to say the noise level is still too low, quickly disappearing again.

Later, when everyone has got over their initial apprehension, we drift back into the room and start joining the groups to listen in, answer questions, and get to know names, faces and backgrounds.

We let this activity drift on so that students begin to describe their own situations to others in more detail. We do not consider this talk about their work and family situations irrelevant because part of learning to learn is thinking about and renegotiating these situations in order to find time for study.

We finish with a very short class discussion that in no way attempts to summarise what has been discussed, and quickly move to the coffee break so that students continue their exchanges over coffee. Again, this coffee talk prefigures the sorts of things students will later discuss in their support groups.

Steps

1 **Ask students to introduce themselves first**

2 **Pass around the handout**

3 **Check that groups know what to do**

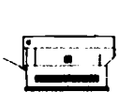
4 **Leave the room with more "important things" on your mind**

5 **Later, circulate around the groups, answer questions**

6 **Finish with short whole-group discussion**

7 **Announce coffee break**

Why am I here?



Why did you decide to try this course?

- You have a specific course in mind for next year?
- To broaden you mind?
- To "test the water?"
- To see if you really are as "dumb" as your partner says?
- To make up for "lost opportunities"?
- As an excuse to "get out" once a week?
- To meet some interesting people or ideas?
- To get a better job?
- To try to understand what is happening to the world (or yourself)?
- Because a friend or partner keeps giving you a hard time about doing something constructive?

Did it take you long to decide?

- Did you think about it for a long time?
- Did you talk to anybody about it? When? Who?
- Did you feel excited? Scared? Interested? Nervous?
- Did you nearly decide not to do try it at any stage?

Can you think of anything that would mean you'd have to pull out?

- Transport problems?
- Partner or other family members objecting?
- Sick children? Or self?
- Childcare problems?
- Getting behind in the homework?
- Finding the course too difficult?
- Missing a couple of classes and getting too far behind?
- Finding the course isn't what I expected?

What's the best experience you have had of learning something?

- Why was it the best?

What was the worst experience of learning you have had?

- Why? How did it differ from the best case?

How are you feeling now?

- As nervous as the teachers?
- Stupid and childish — just like being back at school again?
- Cool and confident?
- Thinking: "Now, all these strangers are going to see me make a fool of myself"?

What would you like to be able to do after this course that you can't do now?

Learning how to learn

What is intelligence?

This presentation focuses on handling the information processing limits of the human mind

Intelligence as *a fixed attribute*

First you will need to debunk the idea that the limits of our mind is a matter of how much intelligence we have. There is the idea that intelligence is a fixed attribute of a person, that each person has a fixed quota of something called intelligence. This notion of intelligence means that learning is not an action or course of action; it is something that happens to you, something that is beyond control. It means the ability to learn is outside your control — you can't improve your learning capacity. It is like your immune systems: some people have good immune systems and some don't; just as some are tall and some not. These things are all beyond our control, beyond the reach of our wills. We are all helpless victims of the quota of intelligence doled out to us at birth.

Students find it very liberating to be told that we are not all marked at birth with a little tick or cross on our brains saying "intelligent" or "dumb". It means that there is not some pre-established fixed limit to their capacity to learn. It means that academic performance is not a matter of biological fate; that "biology is not destiny".

Intelligence as *a way of acting*

We then argue that intelligence is an attribute of actions, not of people; therefore its primary use is as an adverb — "intelligently". You do things intelligently or stupidly. We point out that any action or course of action can be done intelligently or stupidly:

- you can *handle your relations with your children* intelligently or stupidly
- you can *wash a car* intelligently or stupidly
- you can *do the shopping* intelligently or stupidly
- you can *have an argument with someone* intelligently or stupidly
- you can *look after your health* intelligently or stupidly
- you can *play with your children* intelligently or stupidly.

Anything can be done intelligently or stupidly. Anything can be done efficiently, gracefully, fluently, ensuring that there are no hassles, stuff-ups, or break-downs. So, intelligence is not confined to school learning. You can do anything intelligently or stupidly, including school learning. And this learning can include learning anything, not just learning abstract knowledge in school. It includes learning how to tell jokes (or laugh appropriately at jokes), flirt or reject advances, get to sleep at night, or talk on the telephone.

Common explanations for students' failure to learn

not interested	mucking around
too lazy	bad family background
stupid — no brains	doesn't try hard enough
home environment	gives up too easily
can't concentrate	not motivated

Learning intelligently

What we are interested in is how to go about learning and studying in an intelligent way. There are intelligent ways to learn and dumb ways to learn. Students who succeed are studying intelligently while students who fail are studying stupidly.

Re "students who succeed are studying intelligently while students who fail are studying stupidly":

Perhaps a bit absolute and/or ambiguous — what about students who study intelligently but who are beset with external pressures which affect their overall success?

Needs qualification!

– former student

Biological factors

By the way, to emphasise that intelligence is not a biological endowment does not mean that there may not biological factors or obstacles involved. Students will often say: "I've heard about this condition called dyslexia which means that children can't learn to read". We agree that there may be biological conditions that make it hard to learn to read, but insist that only a small proportion of the population is affected.

We can recall a school which diagnosed 90% of its students as afflicted with dyslexia, which is obviously silly. If the only disproof of dyslexia is success in learning to read, then any one having trouble learning to read can automatically be classified as dyslexic. This is obviously circular. However, what we do point out is that many people succeed despite handicaps, that lots of people (even at university) have trouble with such things as spelling, but that doesn't mean they can't read or understand. We even know teachers whose spelling is erratic.

We know one student at University whose reading is very shaky, so she has arranged for friends to read important bits of her course material onto tapes so that she can listen to them; she also tapes all the lectures on her own mini-cassette recorder so that she can listen to them.

In this way she can listen to the meaning of the lectures without having to stumble over trying to decipher her notes. It also means that she can just listen to the lecture without having to try to take notes.

The point we make concerns handling the biological condition intelligently. For example, if you have a condition such as dyslexia that means your spelling is really bad, then you must handle this problem in an intelligent way: you always have your writing checked for spelling before handing it in — either by a friend or by a computer spelling checker; you do not do courses that involve exams without first seeing the teacher and explaining your problem, so that some arrangement can be made so that you are not disadvantaged; you make lists of the important vocabulary in your subjects so that at least you get those words right; and so on.

IQ Tests

What do IQ tests measure?

IQ tests do not measure an innate intelligence — they measure your cultural learning. So, although IQ is a fairly accurate measure of success in school, this is only indirectly related to so-called intelligence. We use an extract from an old IQ test to demonstrate in a quite dramatic way how IQ tests do successfully predict academic success — not, however, in terms of intelligence, but in terms of social and cultural attributes. The test consists of four questions with the likely answers classified as right or wrong:

Question 1

The first question asks the child to identify the US flag.

This is obviously a test of how assimilated a child is into the *mainstream social and political life* of the USA. If a child is a recently arrived migrant or lives a self-contained ghetto life, they might not know the US flag.

What we say is that this IQ test could be accurately paraphrased as:

"Are you a recent migrant to America?"

QUESTION: Identify the picture

CORRECT ANSWERS:
American flag
flag pole
Star Spangled Banner

WRONG ANSWERS:
pole, stick
post, rag
kite

Question 2

The second test item asks children what they would think or do if they broke something belonging to another child. This time the focus is on *reciprocity and compensation* and the media employed to "repay".

The differences between acceptable and unacceptable answers hinges on whether money is used as a form of compensation. Children who place a monetary value on what they broke and can imagine handing over the equivalent value in money or objects, give the correct answer. On the other hand, children who respond in a pre-capitalist cultural mode, who feel shame, guilt, fear, or expect to be punished are considered to have given an unacceptable answer. Again, this question is testing the students assimilation into modern life. We point out that this question could be re-phrased as:

Do your parents earn enough money to give you pocket money you are encouraged to save and spend wisely? or *Are your parents well-off?*

QUESTION:	What's the thing for you to do when you have broken something that belongs to someone else?
CORRECT ANSWERS:	I'd be scared I'd have to buy another one for 'em. If I have one I give it to him. Pay for it. Give them something.
WRONG ANSWERS:	Be ashamed. Tell my mother. Feel sorry. Tell 'em I did it. My mother will spank me.

Question 3 This third test item is very similar to the second. It tests students' means-end focus (rather than the more apparent *moral* definitions of actions and *authority* relationships).

QUESTION:	What's the thing for you to do when you are on your way to school and notice that you are in danger of being late?
CORRECT ANSWERS:	Hurry. Go right ahead to school. Take the street bus.
WRONG ANSWERS:	Go on to school and tell my teacher why I'm late. Not stop. Just keep on going. Get a late card.

Question 4 The final test item contains drawings of two girls: one is of a carefully groomed, Anglo girl, and the other is of a tousle-haired black girl. The question posed is: which is more beautiful? The cultural bias in this question is immediately obvious to all students.

We observe that this question could be re-phrased as: *Are you black?*

QUESTION:	Which is prettier?

IQ Tests and the Education system

IQ as scholastic predictor

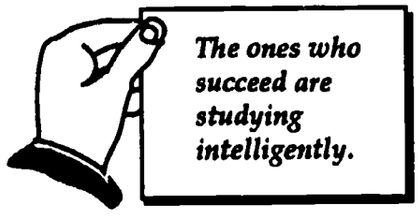
Having shown the *cultural bias* in these test items, we then point out that the test is still an excellent predictor of school success; that if you are a migrant, poor or black you will probably will drop out of school before those who are Anglo, rich and white. So, as a predictor of school stickability the test is accurate, but there is nothing in these questions that in any way tests intelligence. They are a test of who will still be at school in Year 12, or at university — and they test for this by determining your social position.

But the obvious question then is: well, if you don't fail because you are dumb, why do some pass and some fail? What explains academic success and failure? There must be more to it, otherwise everyone would be a success.

Why do some succeed and some fail?
The ones who succeed are studying intelligently.

Those who fail are not studying intelligently; they are studying stupidly. But then, what is the difference between studying intelligently and studying stupidly? What do you have to do to study intelligently?

Our answer is: you have to be metacognitive.

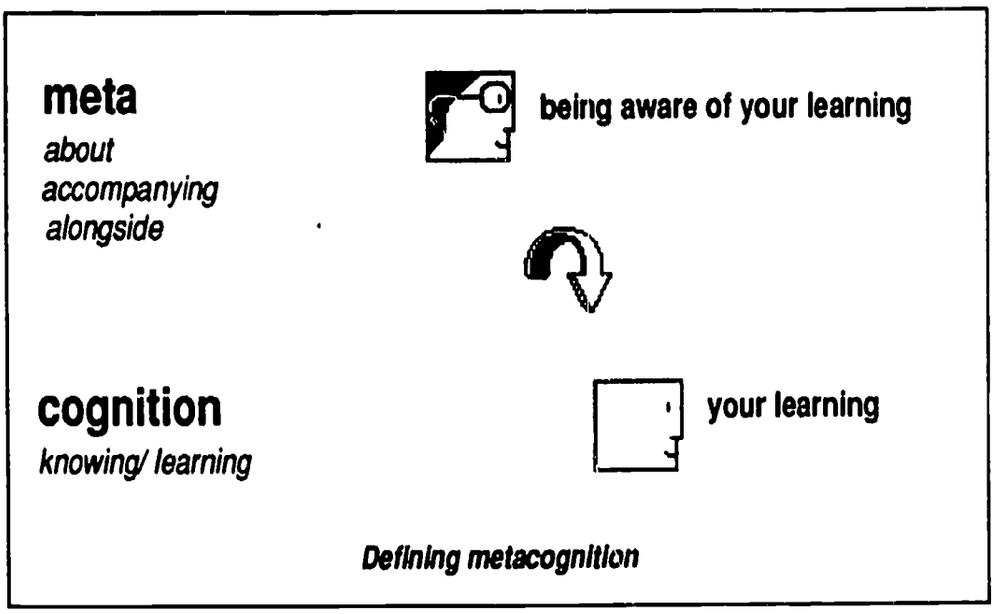


What is metacognition?

Defining metacognition

We explain that *meta* means "about or regarding" and that *cognitive* means "learning". So metacognition means "about learning, awareness of learning". So there is a difference between studying and being aware of your studying. Being metacognitive means being in control of your learning, monitoring your learning, knowing what you know and what you still don't know.

In fact we start off by defining metacognition as *knowing what you don't know*. That is, knowing which bits you already know and understand and what bits you still do not understand.

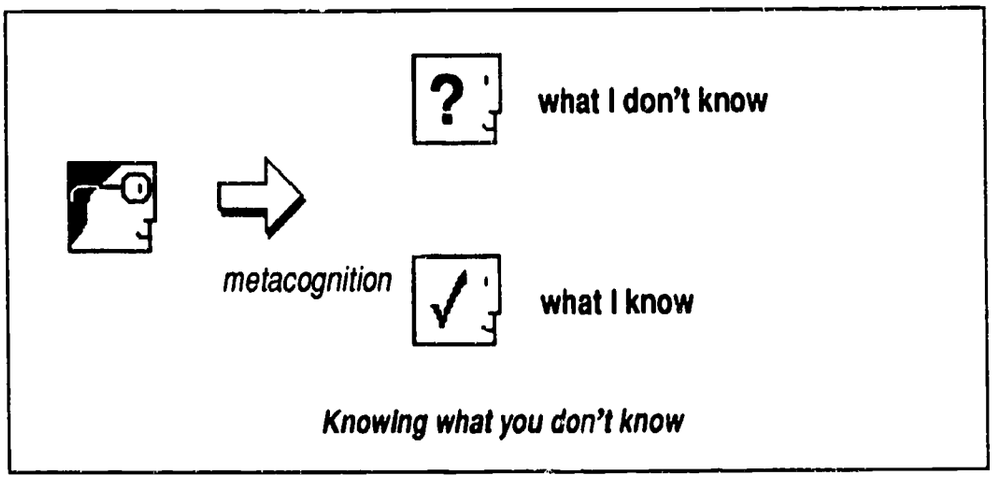


Defining metacognition

What you don't know

Of course there is a paradox here: how can you know things you do not know? Surely they are just invisible blind spots, things that just do not exist for you. But there *are* clear signs directing us to the bits we don't know. They are the bits which confuse us — the things we find in books, or hear a teacher saying, that we can't make sense of.

So students have to learn to reinterpret their confusion, not as a sign of stupidity or a reason to be embarrassed, but as a metacognitive cue that here is something they do not understand. In this way, we can know what we don't know. You can identify what you don't know in terms of your sense of confusion or boredom with what is being said or done.



Knowing what you don't know

Doing things intelligently

Thus, by reframing intelligence as metacognition, as a quality of acting, as doing things intelligently we reframe intelligence as a monitoring process. To do something intelligently means to be monitoring the situation, checking regularly to see that things are still working. So there is what you are doing (e.g. reading a book) and there is another separate process of monitoring your reading, which means stopping every now and then to make sure:

- that you are still understanding
- that you haven't forgotten what went before
- that you haven't fallen into a daydream
- that you haven't become mesmerised by the book and are just being carried along by it.

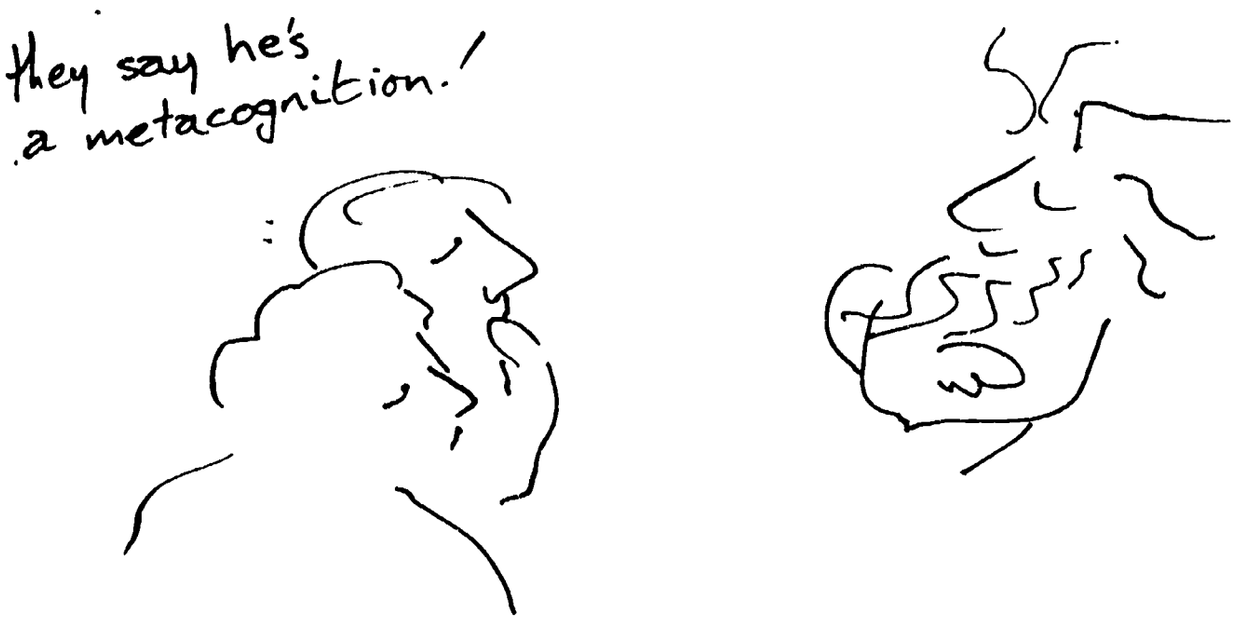
What we do is retain a core meaning for metacognition as *monitoring, overseeing, being responsible for your own learning*, but develop it in relation to different ideas of what learning is. Initially, we accept the notion that learning means attending to what is being said and then remembering it, because this is the notion of knowledge that most students begin with.

So metacognition in this context means:

1 attending to what the teacher or book is saying

2 organising things so that you remember efficiently

To do something intelligently means to be monitoring the situation.



Short-term memory: the bottleneck problem

At this point we pose the first problem that needs to be dealt with metacognitively. This is the "short-term memory bottleneck problem".

Short and long-term memory

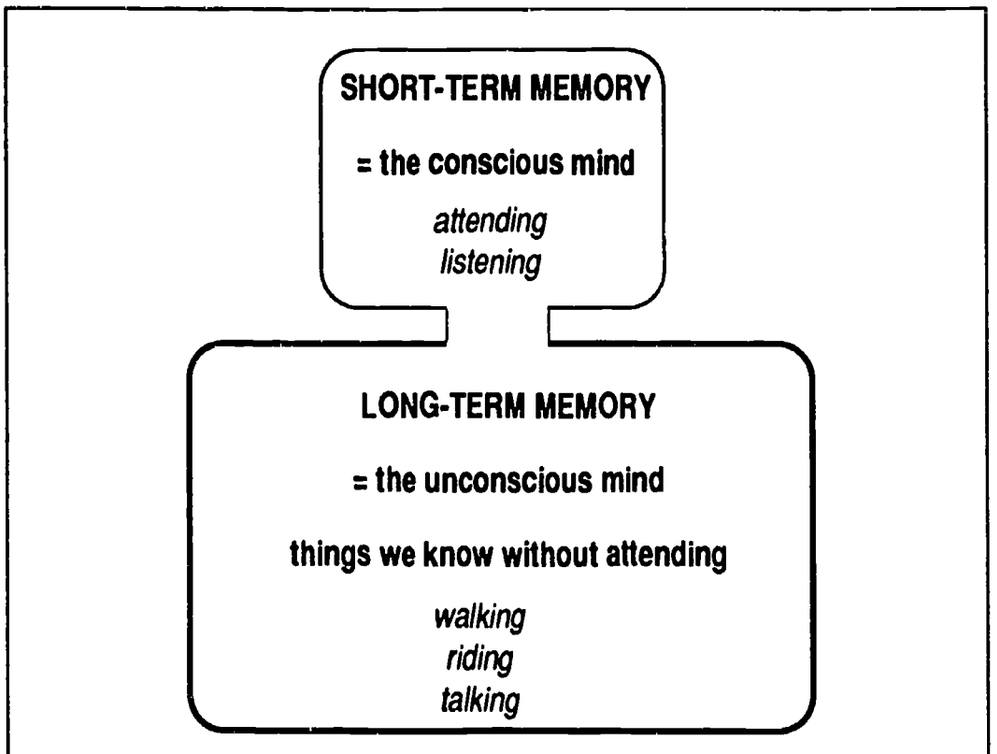
This refers to the fact that we can only attend to 5–7 bits of information at a time, and nothing can be remembered that has not been attended to by short-term memory. So how can we make sure that our learning is not a matter of "in one ear, out the other"?

We explain the short and long-term memory systems in a very loose way. We define *short-term memory* as the conscious mind, as the part of the mind which you use to attend with — the part of the mind that the students are using to listen to us explain things.

The *long-term memory* we define as that part of the mind that knows things even when you do not pay attention to it or are unaware of it. We use the way you know your language or name or your way around your neighbourhood. There are lots of things we know without having to keep them in our mind all the time — how to walk, how to ride a bike, how to talk. These are things we know without being aware of them, or without having to keep them in our conscious mind.

Example: driving a car

To illustrate the limits of attention we use the experience of learning to drive a car. When we are learning to drive a car, there seem to be too many things to attend to all at the same time: the accelerator; the clutch; the brake; the hand-brake; the indicators; the steering; and, of course, the other cars. Obviously there are more than 5–7 things happening here and we cannot attend consciously to them all. At the time it is just too much; it is overwhelming; it seems as if we can never learn to drive.



Defining long-term and short-term memory

However, after a time we find that we are doing things without thinking about them. We steer without thinking, we turn corners without thinking about it, we put on the brake without thinking about it, and eventually we can even change gears without thinking. And the ultimate — which is very scary to think about afterwards — is that we can do everything without thinking; we are not even conscious of the other traffic. Especially when we are stressed or preoccupied with something, we can drive completely on "automatic" and be oblivious to everything. When we get home we say, "I don't remember going through that intersection. I can't remember if I met any traffic". And then we think, "I was lucky not to have an accident". But in fact, we never seem to.

The bottleneck problem

Selecting what to attend to

What this means is that to attend and remember intelligently you have to be metacognitive. If it is impossible to attend to everything,

- Which 5 or 7 bits are you going to make sure you remember?
- Are you going to leave this to chance, to whatever happens to catch your attention?
- Are you going to leave this class only remembering where the toilets are, the expensive jumper the woman in front of you was wearing, the funny accent the teacher had, and the very last thing that was talked about?
- Or are you going to be metacognitive and consciously decide which things to remember?

Monitoring learning

So, the memory bottleneck problem is the first illustration of the need to monitor and consciously oversee learning — to be metacognitive. It is the first example showing that you can either leave things to fate, or take control of what you learn and of what you remember.

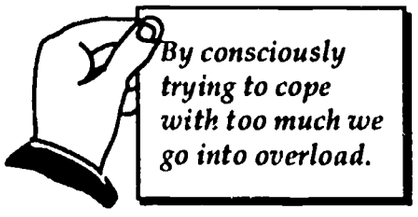
We explicitly challenge students:

Let's say : there have been about 100 things dealt with in the class, you are going to leave this class soon and you will only remember 5–7 bits of information. Which 7 bits are you going to choose to remember?

Or, take another example:

You are writing. Let's say that there are 100 decisions involved in writing a sentence — lots of decisions to do with handwriting and penmanship; lots of decisions to do with spelling; some decisions to do with grammar; some decisions about which actual words to use; and decisions about what you are trying to say. Again, you cannot attend to all these at the same time. Which decisions are you going to attend to first? Which next?

To attend and remember intelligently you have to be metacognitive.



Of course, this are just invented examples. No-one really knows how many decisions there are in doing something. The only thing that gives us a bit of a guide is how complicated it is to write computer programs so that computers can do them.

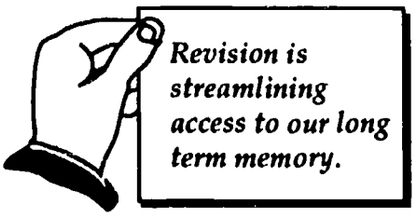
Also, an obvious question to ask, and students will ask it, is: what is the time span involved here? Again, there is no answer that we are aware of. Probably human attention does not operate according to clock time. For our purposes we can just use the idea that any stretch of meaningful action or text involves a large number of decisions or bits of information and that this is far more than we can consciously cope with. By trying to consciously cope with too much we go into overload.

So, we are interested in questions like:

- how much of a film can you remember afterwards?
- how much of a book can you remember afterwards?
- how much of a lecture can you remember afterwards?
- how much of this class will you remember afterwards?

Without getting into the detailed laboratory experiments of cognitive psychology concerning information processing, everyone can intuitively agree that we do not remember all the details but only a few specific snippets and the overall drift of things. In fact it is a common experience that after finishing a book we can't remember anything about it at all at first. However, we only have to glance again at it quickly or have someone else say a little about it and it all comes rushing back. It was in our long term memory all along but we didn't have a way to access it.

This idea becomes the basis of our account of the meaning of revision. Revision is streamlining access to our long term memory.



Three ways to improve memory

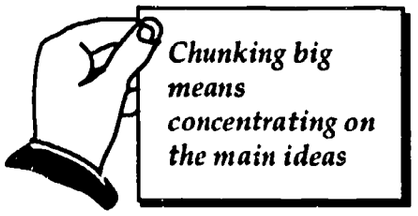
There are 3 ways around the bottleneck problem, the problem that more is going on or being said than we can consciously take in. We call them:

chunking big

automating

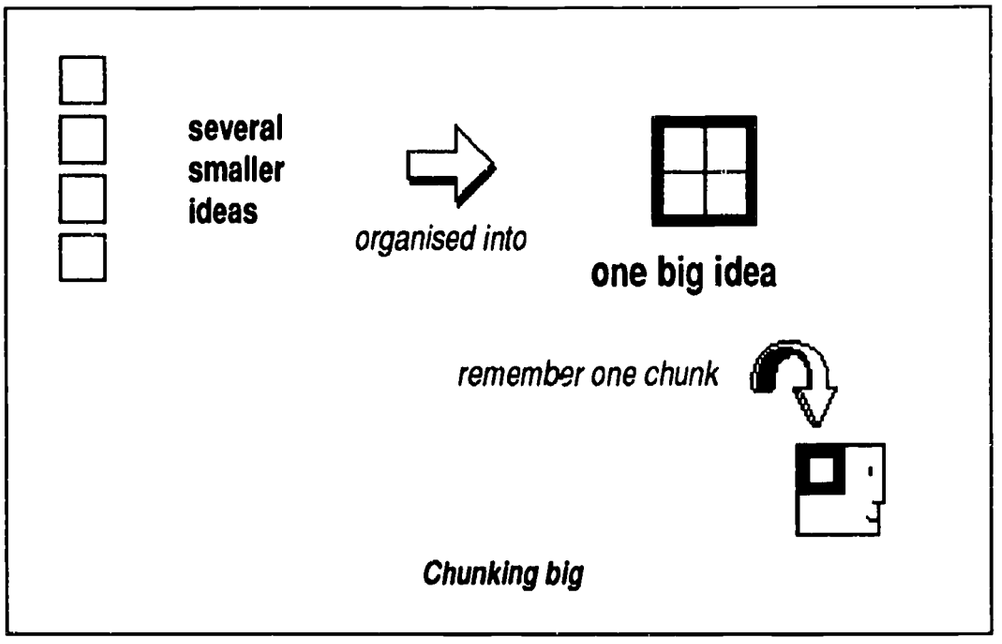
"a bit at a time"

Chunking big



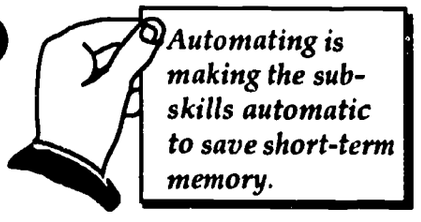
Chunking big means that you can organise lots of little ideas into one big idea and then concentrate on remembering that one idea.

In this way you have handled all the little ideas. Now, in any particular class there are usually only a few big ideas being dealt with. So, if you pay attention to these and focus on these, the little ideas will fit in with them. Chunking big is what teachers are talking about when they tell you to concentrate on "the main ideas".



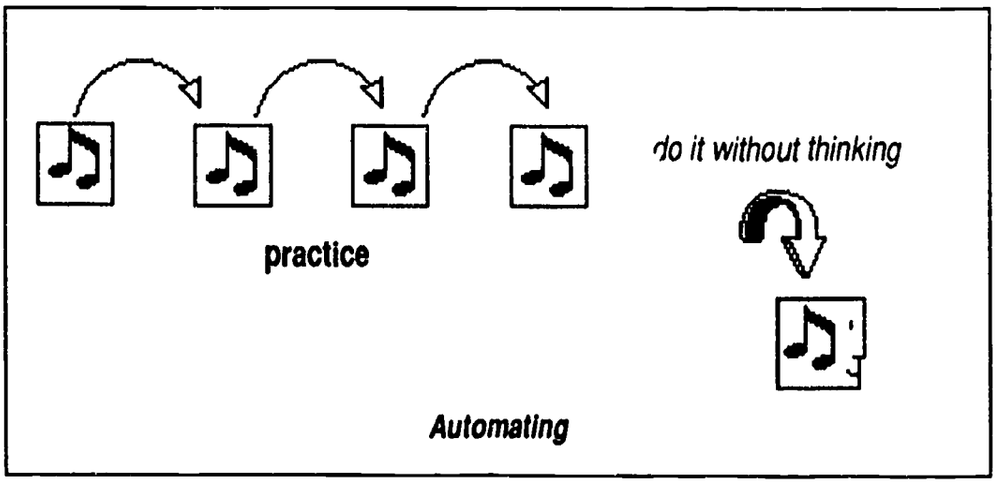
Chunking big

Automating



Automating means practising something so that you can do it without having to attend or think about it. This is what happens when we become regular drivers. Similarly, most of us do not have to worry too much about our penmanship when writing.

So automating means trying to make as many of the relevant sub-skills automatic so that we do not have to use up valuable short-term memory by attending to them. If you have to keep worrying about all the words you are spelling you will not be able to concentrate on what you are saying. By the time you have spent some time trying to spell a couple of words you will have forgotten what you were going to say. Automating is what people mean by "practice makes perfect".



Automating

But notice that *you can really only automate skills, not ideas*. To try to automate ideas can lead to disaster. This is what is meant by memorising things. We might be able to learn our tables by saying things over and over, but you cannot learn more complicated ideas by saying things over and over trying to impress them on your mind, trying to automate them.

I remember a couple of friends I had at University, good Catholic students who had done well at school by learning things off by heart — by automating them. This meant they could get the right answer on short answer questions — if there weren't too many.

Unfortunately, in their first year at University they tried to learn Economics this way — by trying to learn the whole economics text-book off by heart. They worked tremendously long hours at this, much more than any of the rest of us. But whereas we all passed, they both failed miserably, getting about 20%. Everyone was shocked because they were the hardest workers we knew. It seemed unfair. Perhaps it was a mistake.

They then repeated the following year, working even harder. They were probably averaging about 9 hours a day. But guess what: this second time they got even less — about 15%.

The moral of the story: you can't just memorise ideas — you have to understand them first.

This point will become clearer when we talk about schemas. But at this stage, we can say that with ideas it is better to chunk big than to try to automate them. Don't try to rote-learn ideas. Don't go around tapping or nodding your head chanting over and over to yourself, "Chunking big means going for the main ideas", because after a while you might find that you have been saying, "Chunking means going for the big ideas". It's like passing a message down a line: by the time it gets to the end, it will be completely changed.

"A bit at a time"

A bit at a time means organising things so that your conscious mind is not overwhelmed by trying to attend to too many things at once.

For example, even though your spelling may be shocking, you just write a first draft using any old spelling so that you can concentrate on what you want to say. Then you go back and do another draft concentrating just on the spelling. And so on. In this way you just chip off a few things at a time to focus on.

"A bit at a time" means you chip off a few things at a time to focus on.

How do you eat an elephant? *"One bit(e) at a time!"*

One bit at a time

But notice one thing — it is better to concentrate on the more important things first. That is, try to write down what you want to say before worrying about your spelling, and do the spelling before worrying about making a neat copy with neat penmanship. You will find that the same applies to reading — we will go into this in more detail later.

Long-term memory

So these are three ways to protect against overloading your short-term memory or conscious mind. What about long-term memory or our unconscious mind? How can we make sure that our short-term memory transfers things to our long-term memory and our long-term memory does not forget them? And a further problem: how can we make sure that we can get them back out again?

Long-term memory is like a bag of fish hooks that are all hooked into one another.

Let's assume that we are careful not to overload our short-term memory: we concentrate on chunking big; we automate all the low level skills; and we don't get side-tracked by details — that is, we "do a bit at a time", concentrating on the important things. How can you make sure that you don't forget what you have attended to? How can you transfer things from your short-term memory to your long-term memory?

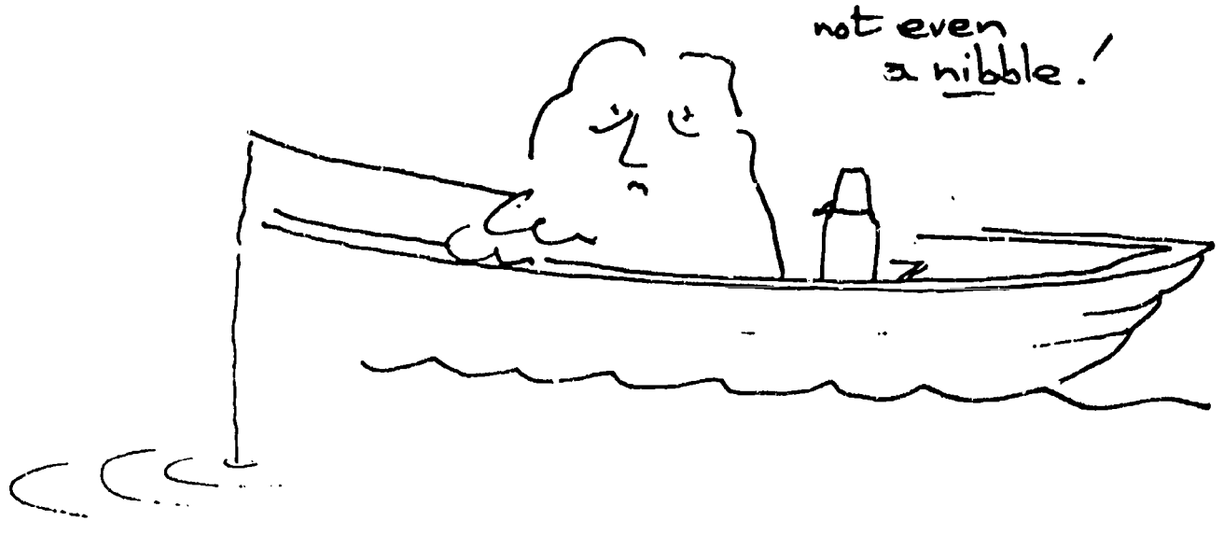
To understand this, we have to introduce a new idea. This is the idea of a schema.

Schemas

A schema is a group of ideas all connected together in your mind.

For example, if I say "Melbourne Central Business District", you can all probably call up lots of things from your long-term memory: the Mall, Myer's, the GPO and so on. These are all connected up in a schema in your long-term memory. So, when I said "Melbourne", you could think of lots of things connected to it in the same schema.

What this means is that bits of information in our long-term memory are not separate, like a bag full of marbles. Rather, our long-term memory is more like a bag of fish hooks that are all mixed up and hooked into one another. We can think of a schema as a group of ideas all fish-hooked together, so that if you pull one out into short-term memory, the others come too.



Retrieving information

Now the question becomes: how can we make sure that the chunks we want to remember are hooked into a schema? If they aren't, they can sink to the bottom of our long-term memory and we can't get them out again — we have forgotten them.

We have to do two things:

- attend to them with our conscious mind
- mesh them in with a schema we already have

We have to think about the new ideas and connect them up with ideas we already have. We might do this by thinking,

"This is not what I used to think" or

"This connects with something that happened to me the other day".

We have to think about the new ideas and connect them up with ideas we already have.

In this way we connect up the new ideas with ideas we already have schematised in our long-term memory. So to make sure we remember things it is not just enough to attend during the class. We must then make sure that this new information is transferred to our long-term memory. We do this by:

- mulling it over in our short-term memory
- consciously thinking about it
- comparing it to what we already know.

Revising

Later we will show how revising means repeating this process to check that you can still get the ideas back out of long-term memory again. Revising means dragging a schema out of long-term memory and re-working it in your conscious mind. In this way you make sure that all the fish hooks are working properly.

The first session of the Footscray course was team-taught, with Rob playing the main role. Students sat at tables of about four. Both ends of the room were used. There was an overhead projector at one end and a whiteboard at the other.

Rob is a witty, expressive teacher who adopts a very colloquial form of speech. The students were most attentive (as was I).

One part took the form of a lecture supported by overhead projector slides and whiteboard diagrams. It was based around the following points:

- myths re intelligence were debunked
- any adult who learns the right strategies can succeed at tertiary study
- people learn by r cognition

Much time was spent encouraging students to ask questions...

Rob ended his lecture by saying that it had been so condensed that it was a pack of lies and that they should all be confused.

It was the students' job to "find the holes".

– teacher, observing Footscray class

Our talk notes

Learning how to learn

- ## What is intelligence?

using IQ to account for past failure

intelligence is a skill, not an attribute

learning and studying can be done intelligently or unintelligently

- ## What is metacognition?

is monitoring and controlling the learning process

knowing what you don't know

working our what you have to work on

symptoms: confusion, boredom, drifting off, can't see the point

- ## Short term memory limits

This is the first problem you have to handle metacognitively

2 memory systems

short-term memory bottleneck or overload

can only attend to five things

if bombarded with too much then can't cope

e.g. learning to drive a car

- ## How do you handle memory bottlenecks?

Chunk big

organise bits into large bits

get the main ideas

not 100 bricks but 1 wall

Automate

don't have to attend

by practising regularly until don't need to think about

experienced driving

not having to worry about spelling little words when writing

know your name without having to think about it all the time

A bit at a time

only focus on a few aspects at a time

drafting — i.e. write without worrying about spelling, neatness

read more than once — skimming at greater depth each time

45 mins

Your talk notes

Welcome to the course

- **What is intelligence?**

- **What is metacognition?**

- **Short term memory limits**

- **How do you handle memory bottlenecks?**

  Chunk big

  Automate

  A bit at a time

20–30 mins

IQ Test

Question 1

QUESTION	Identify the picture
CORRECT	American flag flag pole Star Spangled Banner
WRONG	pole, stick post, rag kite

Question 2

QUESTION:	What's the thing for you to do when you have broken something that belongs to someone else?
CORRECT	I'd be scared I'd have to buy another one for 'em. If I have one I give it to him. Pay for it. Give them something.
WRONG	Be ashamed. Tell my mother. Feel sorry. Tell 'em I did it.

IQ Test

Question 3

QUESTION	What's the thing for you to do when you are on your way to school and notice that you are in danger of being late?
CORRECT	Hurry. Go right ahead to school. Take the street bus.
WRONG	Go on to school and tell my teacher why I'm late. Not stop. Just keep on going. Get a late card.

Question 4

QUESTION: Which is prettier?

Speed-copying

Sometimes students need to learn a quite specific type of writing, perhaps for their job.

These students will often say that they need to learn the basics — they need to learn punctuation, spelling, and grammar. The problem is: how are you going to help them learn, in just a couple of hours per week, what normally takes years of schooling and hours of private reading?

Specific forms of writing

If you can't teach the entire ground rules for the whole English language — its grammar and uses — what can you do? Well, you can focus on the *actual forms of writing* the student needs to master.

As an example, I recently had a person contact me who worked in a laboratory for a major company. He was a skilled laboratory worker and now they wanted to promote him. But this meant he would have to write the Laboratory Reports. His schooling had ended at Year 8 in a Technical School.

In this case I had him bring in samples of the types of reports he needed to write. I explained the rationale behind copying: that copying is a good way of learning the spelling, the phrases, and the structures of a particular form of writing. We then agreed he was to spend 20 minutes a day copying these laboratory reports.

The value of copying

The next week he had — simply by being forced to focus on the details — noticed that there was in fact a difference in the reports: if they were going to his boss only without being seen by anyone else, they were quite short and casual; on the other hand, if they were going to be seen by other sections of the firm or released to customers or suppliers, they were written more formally and a table of results included. He was excited by this discovery as it had transformed what was previously just a fear-inducing blur into noticeably distinct structures that could be examined, understood and learnt.

Discovering structures

The following week he discovered something else: he noticed that there was an implicit apology in the first sentence of some of the lab reports when they had been very late. This apology was not explicit — in fact it was achieved by a simple shift of a verb from the active to the passive. I myself was totally ignorant of these features of the lab reports written in his firm, and it would have taken me a lot of linguistic analysis to have discovered them. He noticed them straight away. He was also mastering the spelling of the (fairly restricted) vocabulary and phrasing used.

So speed-copying provided a way for me to help him to help himself. It was he who gathered together the corpus of laboratory reports; it was he who copied them; it was he who kept noticing various features (especially context-text relationships) which were beyond my experience.

I simply provided a framework within which he could teach himself the linguistic structures he needed.

Speed-copying

Writing involves the coordination of many different skills. One technique we use to help students cope with the multiple demands of writing is speed-copying.

What is speed-copying?

The rules for Speed-copying

Very simply:

- the goal of speed-copying is to copy from a suitable piece of coherent text as many words as possible within 20 minutes, every day
- concentrate on "taking in" as large a glance as possible — until you can "take in" a whole sentence at a time
- neatness is not a major concern
- count and record the number of words copied at the end of each writing session
- continue regular copying until you can copy 500 words within 20 minutes.

Experience suggests that fluent writing entails the ability to copy at about this speed. For some people, this goal is already within reach; for others it may mean weeks, even months, of regular copying.

One important detail: *you should not copy for more than 20 minutes in any single session.* In my experience, students can get "carried away" and do so much that they are satiated and unable to develop a habit of daily copying. If you miss a session it is best to do two widely spaced sessions the next day — e.g. one session in the morning and the other in the evening.

What are the benefits?

Speed-copying improves writing

Although it focuses on the sub-systems of writing, on transcription rather than invention, speed-copying is not *atomistic* in its effects.

Larger units of text

The emphasis on speed directs students away from a pre-occupation with individual letters or syllables towards a focus on larger, more holistic units of text — phrases and clauses. This develops visual recall of words and phrases, lengthens reading span, and helps develop higher level (and thus more efficient) "chunking" in short-term memory. This in turn means that the "chunks" temporarily stored for copying gradually lengthen into phrases, clauses and whole sentences — which are the primary units of meaning and thought.

Automation

This push towards higher level chunking means that units at lower levels must be automated. That is, details of letter formation, spelling, punctuation and "little words" must be handled subliminally — not by conscious attention. Just as the fluent driving of a car assumes that the driver has automated such details as changing gears, co-ordinating clutch and accelerator, locating turn indicators etc.,

fluent writing assumes that the details of letter formation, spelling, punctuation and "little words" are automated and so they are not drawing attention away from higher-level meanings.

Inner speech

Another feature of copying that results from improved chunking is that "inner speech" is co-ordinated with the physical speed of writing. This co-ordination is essential for overcoming problems of *blanking* and *a racing mind*. Not being able to do this means that everything gets "out of sync." and you end up losing continuity of meaning. It is like trying to compose an essay on a typewriter when you're still learning the position of the keys — too much attention is being focused on the details to keep in mind what you are going to say next.

Rhythms

One final feature of copying is that the rhythms of good prose and the various forms of sentence structure and phrasing are absorbed by copying. I cannot provide direct evidence for this, except to point to the improvement in student writing after a course of speed-copying.

Speed-copying develops study habits

From a your point of view as a student, speed-copying probably presents itself as "easy". You might find it less daunting than having to "make up" the ideas as well. This means that the thought of having to sit down and write for a 20-minute session each day is also less daunting, and so acquiring the routine of sitting down for 20 minutes each day is easier. It means that you can re-negotiate family habits and patterns without the added pressure of generating your own ideas as well.

Monitoring the effects of this 20 minute study-block on the lives and routines of yourself and others is a central goal of speed-copying.

In fact, it is quite wrong to see copying as easy — if you've had to copy out any of your own writings, you'll know that it is probably more mentally tiring than the actual composing itself! Your mind seems to be constantly wrenched from one level, such as grammar, to another, such as spelling and meaning. And just trying to keep your place in the text you are copying from (even with the aid of rulers) is an almost impossible task.

Speed-copying involves tangible goals

To most students, *speed of writing* is a more tangible and realisable goal than aiming for writing which is "exciting" or "profound". The adjective "fast" is immediately meaningful to everyone. And, because everyone has learnt to walk, run, ride a bike, to catch and throw a ball, there is an intuitive linking of the concepts of fluency, facility, grace and ease with the notion of speed.

Fluency

The extrapolation of this cluster of concepts to writing is, in our view, quite valid. It is most noticeable that poor writers are as a rule also slow and laborious writers. This means that the increase in speed occasioned by a course of speed-copying is

immediately recognised by students as an improvement, and this awareness can be a crucial step in demystifying the process of writing. Instead of being a mysterious spiritual ability parcelled out at birth alongside "intelligence", being a good writer becomes something that is learnable just like any other skill — through practice. This insight alone can significantly benefit students' writing and their attitude to it.

Practising sub-systems

Practice does make perfect, in writing as in any other activity. So, it is not illusory for you to think that your writing is improving as your writing speed increases. In fact, you are mastering all the sub-systems of writing with only one difference — the text in your "inner speech" derives from a book, not from your own thinking. While this difference is ultimately crucial, we can ignore it at this early stage of learning to write: you must know how to move your legs before you can walk!

Relief from assessment

As well as helping you concentrate on the medium without having to worry about the content, speed-copying relieves you of the burden of self-consciousness when your written products are the principal medium for *assessing your understanding*. This results in a heavy feeling of being "on trial" every time you put pen to paper. (If the ratio of assessed to non-assessed written material changed, students might escape the feeling of someone looking over their shoulder all the time.)

But, paradoxically, the very conscientiousness of teachers prevents this; and, of course, most students want a mark anyway — that's what writing in schools is for, isn't it?

Education on the cheap

Radio: 3AR

621 KHz on the dial

There are many good radio "talk shows" on Radio National

These programs are often presented by academics and employ the vocabulary, concepts, and turns of phrase used in tertiary institutions. They also typically use the same structures you will learn to use for your essay writing.

As well as trying the ones listed below,

1 you can get a brief description of what's on by checking the *Green Guide* in **The Age** on Thursday each week

2 just tune in to 3AR between 6 pm and 8 pm or after 10.15 pm

There is usually something worth listening to. However, there are particularly good programs on Saturday and Sunday. Many of these are repeated during the following week.

Here are some we recommend:

Programs	Time		Repeated	
Background Briefing	Sun	9.10 am		
The Coming Out Show	Sat	5.00 pm		
Earthworm	Wed	8.30 am	Wed	5.30 pm
Education Now	Thur	7.15 pm	Fri	3.03 pm
The Europeans	Sun	12.00 pm		
Health Report	Mon	8.30 am	Mon	5.30 pm
Radio Helicon	Mon	7.30 pm		
Science Bookshop	Fri	10.10 pm	Sat	6.00 pm
The Science Show	Mon	7.15 pm		
Offspring	M–F	9.03 am		

Newspapers

If nothing else, it is important that you begin to read the newspaper on a regular basis. We suggest you read **The Age** newspaper. We tend to think **The Age** at least attempts to provide an interpretation of the significance of events rather than merely reporting events.

Radio National log sheet

What you do

Over the next 4 weeks, we would like you to keep track of the programs you listen to on 3AR (621 on the AM dial):

You need to:

1 record the name of the program
2 fill in the time and date
3 write a brief comment about it

This comment may be your response to the content, or it might be a brief statement or summary, or whatever you choose to record.

Program	Comments	Date/time
1 _____		
2 _____		
3 _____		
4 _____		

Reflections on Session 1

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student*

This whole approach is

- too alien for me to adopt ☐
- pretty much in line with what I think anyway ☐
- an extension of what I already teach ☐

I would be a bit unsure about giving a talk on

- intelligence ☐
- metacognition ☐
- short and long-term memory ☐
- the 3 ways of coping with memory bottlenecks ☐

There seems to be

- too much here for one of my sessions ☐
- not enough for one of my sessions ☐

There is

- too much here for me to remember ☐
- I've "chunked big" enough to handle it all ☐

Name a situation when you had to

- chunk big _____
- automate by practising a lot _____
- take a slice at a time _____

Have you ever been very confused when suddenly things fell into place — the "Aha! experience"? What was it?

Who was your most important teacher or mentor?_____
How did this person influence your approach to learning (your metacognition)?

Do you try to organise your teaching so that you never teach more than 5 chunks at a time?

What do you do when you notice students in overload?

Memory 2

session 2

Summary

This session explores the need for revision and introduces methods and models to assist with understanding how memory works. In the first part of this session you *publicly demonstrate to the students that revising is necessary.* In the second half of the class, this idea of knowledge as understanding is explained in terms of the way ideas are organised into schemas in long-term memory.

By the end of this class students should realise that:

- Memorising is not enough for good learning.
- To understand new ideas you have to relate them to ideas you already possess — the prior knowledge in your existing schemas.
- Revising is essential to securing ideas in long-term memory.

	Read before class	*To take into class*	*Student handouts*
Revision of Session 1	**What is revision? ....93** Some notes on the main ideas in this section	**Activity guide.....96** Suggested approach to revising the first session	
Homework review		**Homework review....97** This provides a short explanation and then tells you how to organise this group discussion	***Confessions*.....99** This is the handout students use to guide the discussions at their table .Make at least two photo-copies per table.
Memory	**Talk notes .....101** Recap of the main points we present to students	**Your notes .....102** Headings for you to fill in	***Organising your* ....103 *memory*** This is a summary of the main points for students
Mindmaps	**Revising with.....107 mindmaps** Explanation of thc reasons for using mindmaps for revision.	**Activity guide.....113** Suggested approach to the class segment	***Mindmaps* .....114** Some samples of student mindmaps of this session

Reflections on Session 2

session 2

Lesson plan

Revision

Revision of Session 1 — 30 mins

Three aspects of Revision
- metacognition re what forgotten
- explaining what you understand
- re-processing schemas

Homework review — 45 mins

Realise that
- juggling is necessary
- perfect student is a myth
- have to take short cuts
- dropping out is no solution

Confessions of a new student

Break 30 mins

Organising your memory — 45 mins

- long-term memory is structured in schemas
- successful learning is attaching new knowledge to existing schemas
- revision means re-processing ideas in working memory
- this works by chunking the ideas into existing schemas

Organising your memory

Mindmaps — 30 mins

- explain purpose of mindmaps
- show some examples
- present exercise

Homework

- **Mindmap of course so far**
- **Listen to radio**
- **Continue speed-copying**

Your notes for Session 1

What is revision?

One of the central ideas we try to get across to students with the notion of metacognition is that they have to take responsibility for their own learning.

This means that they also have to take steps to find out what they still remember, what they have forgotten, and what they are confused about.

Taking responsibility

The teacher's job

Most students are ill-prepared for this task. At school this would have been done by the teacher giving "a test" or "going over your answers". The teacher was your metacognition: it was the teacher's job to find out what you hadn't learnt or understood. All you had to do was to do what you were told. Whether doing something actually did help you to learn or not was not your business.

Poor methods

The other reason that students are ill-prepared for revising properly is that schools tend to encourage a reductive notion of revising. In schools the usual idea of revision from school is the idea of "going over your work". What this means is either copying out your notes or trying to rote learn them. That is, you:

- open your notes or the text-book at the bit you have to revise
- look at it
- then either shut your eyes and say it over to yourself or try to write it down without looking back at the page too often.

Even worse, you might just run your eyes down the page saying to yourself, "Yes, I remember that". None of these is an effective revision strategy, because each focuses on trying to reinforce what you already remember.

Knowing what you don't know

Our view is that you *must begin with a blank page* and write down what you do remember first.

The trouble with the revising strategies condoned in school is that they cannot identify what you have forgotten. For us, the main point to revising is to isolate those things you have forgotten, those things that are not yet tied into your schemas properly. Reinforcing the things you have remembered is just an added bonus.

Revision: three main ideas

Metacognition

The first idea is that revision is an exercise of metacognition — it is checking to see what you can still remember and what you have forgotten. So, revising must include a way of checking or testing what you have understood or remembered and what you have forgotten or got confused about. This is the most important function of revising.

Long-term memory

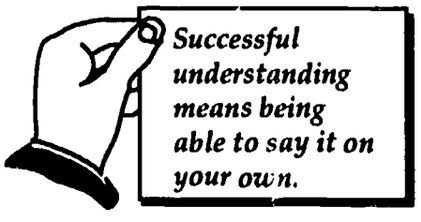
The second idea relates to the transfer of information from short-term memory to long-term memory. Because this transfer is not successful as a once-only process, it has to be repeated at regular intervals. By bringing back into our conscious mind what we have already learnt, we are both checking what has been successfully transferred to long-term memory and at the same time re-weaving that information more tightly into schemas in long-term memory.

Explain it

The third idea is that unless you can explain something, you cannot be sure you really do understand it. It is not good enough just to listen to someone else explain something and, as they go through it, say to yourself, " Yes! I remember that". Successful understanding means being able to "say it on your own", not just recognise it when someone else says it.

As teachers, we can understand this idea by thinking what it's like trying to teach an idea or concept we don't fully understand. When we are slightly out of our depth, we have a lot of trouble saying what we want to say — we stutter, stammer, have lots of false starts, and so on. Yet, when we explain something we do understand, we usually speak fluently and confidently. In other words, the best way to judge whether you understand something is whether or not you can explain the idea or concept to someone else.

Fortunately, as teachers, we are faced with lots of occasions when we do have to explain things and because of this we eventually do get to know our subject matter very well. But it is important to let students in on this, and give them opportunities to make sure they understand something they are trying to learn.



Tell students to practise this revision technique by trying to explain what was discussed to a friend or a student who missed a class. It is only when you are able to explain something to someone else, that you can feel confident that you have understood it.

Teaching and revision

Overviews

When a teacher begins a class by recalling what was covered in previous sessions, most students just continue getting their books out and don't bother to take much notice.

- They certainly do not take notes of this summary.
- They do not realise that the framing of this summary is at a higher level of abstraction than anything that was actually said in the previous class.
- They do not realise that it would be better to have missed the previous class and simply to write down word-for-word what is said in this summary.
- They do not realise that if they noted down all the summarising statements over a year-long course, they would have the most accurate and ample understanding of the course possible.

Introductions

Establish frameworks

Unfortunately very few students understand the point of introductory statements. They think that the teacher is just "grabbing the floor". Rather than recognising them as a high-level *look-back* or *look-forward* statements which organise and articulate the entire course into a coherent single unfolding text, they view them as part of the conversation within the classroom. They think the teacher is simply trying to get control over the conversation by talking longer and more loudly than everyone else, so that eventually everyone will have to listen.

Summaries

Summaries are not just repetitions

Certainly, this interpersonal dimension exists. Initial statements are in fact bids to establish dominance of voice and topic. However, they are not only this. By focusing only on this interpersonal dimension of control, students don't pay attention to the actual content of what the teacher is saying. Students think a summary is just a repetition in exactly the same words, that a summary is just a repeating. They do not realise that a summary is at a higher level of abstraction than that which it is summarising. A summary in fact catches up what it is summarising into a more abstract schema and links it into a larger framework of concepts — a framework which has to encompass the entire course or at least a long stretch of the course.

Looking back

Let students themselves "look back" regularly

Give time for student themselves to revise by summarising where the course is up to. Make it clear that this is an important activity. Don't undermine its importance by cutting it short or by saying, " Right, now let's get onto the more important thing — today's class." Revising (look-backs) should become an important and habitual activity that is seen as integral to most classes. Preferably this activity should be a ritual which begins every class — using mindmaps.

Control talk

Separate *control talk* from *ideas talk*

When you can remember to do it, keep control talk separate from ideas talk. That is, do not demand attention by saying that something is important. Quieten a class by asking for quiet — and then waiting for silence. Don't begin to give your overview as a way to punish or quieten those not listening. Try to outwit the "avoiding student" who usually manages to spend the beginnings and ends of classes and activities looking for a pen or trying to borrow one, and never knows what the class has to do, or (more importantly) why. This is your classic "cue deaf" student.

Activity guide

Revision of Session 1

Showing the need for revision and publicly modeling how to revise.

In the first part of this session you *publicly demonstrate to the students that revising is necessary.* Show them that, even though they were able to follow the ideas in the class last session, this does not mean they can still remember them a week later.

To know is to understand

You dramatise the difference between remembering in the sense of being able to say, "Oh yes, that's right, now I remember it" when someone else says something, and remembering in the fuller sense of being able to say it yourself. You try to emphasise that real remembering means that you can say it yourself, not just recognise it when someone else says it. If you can't say it, you do not remember it.

You can see that at this point we are making remembering dependent on understanding; we are shifting the definition of learning — of what it means "to know something" — away from just being able to repeat it. "To know something" you must be able to say it; but you can only do this by understanding it; memorising is not enough.

Steps

1 **Ask students who missed the last session to sit in front of the class**

2 **Ask rest of class to explain to these students what the first class was about *without consulting their notes***

Openly encourage the newcomers to ask lots of questions, to say "I don't get what you are saying", "Why?", "Explain more".

Insist that students address their explanations to the newcomers, not to you.

Don't allow one or two to dominate. Get as many to contribute as possible.

3 **When they have run out of ideas, they can look at their notes**

4 **Add your comments when explanations have finished**

This segment can take over 30 minutes, but it is not time wasted. It is important as a way of modelling how to do revision.

20–30 mins

Activity guide

Homework review

"Confessions of a new student" is a small group discussion.

The task

Students are asked to form small groups and discuss the questions on the sheet. They are not required to record any answers, or to respond to every question (some won't be relevant).

The questions are intended as a catalyst or guide to focus the discussion. We have found that in a small group students are far more likely to be honest with each other than if they were speaking to the whole class. The informality and more intimate nature of a small group allows for more people to have a say in a less threatening way.

Teacher's role

If the teacher uses this time to join in casually with different groups, this serves two purposes:

- First, the students see it as *a chance to ask questions* which they wouldn't put to the whole class — i.e. they view it as you giving them some of your private time.
- Second, it helps you *get to know individuals* in the class more quickly. You are able, by listening to the discussion and/or answering their questions, to treat the group discussion as a private interview with the students as well.

Hints

Some will have done the homework, and can't wait to tell you all about it.

This is good, but this direction by those think of themselves as the "good students" might dominate and leave the ones who haven't done the work feeling even sicker. Rather than leave these "bad" students in silence, the objective of the exercise is, in a supportive atmosphere, to expose the difficulties people had in finding time to complete the work and to discuss different ways of managing.

Most importantly, we are trying to help people understand that study always involves a lot of guilt.

There is guilt over unfinished work, guilt over ignored children or partners, guilt over effort not put into the things you normally do (chores, outings, friends) in order to find the time to study. It's important for people to realize that this is the reality. Sometimes you get things done and sometimes you don't.

The real question is what you can do to fit study into an already busy life.

Missing classes

A key point we stress is:

If you can't get the homework done, the worst thing you can do is stay away from the class "until you catch up".

All that will happen is that you will fall further behind. Actually, most classes go over what you had to do for homework, so you can usually catch up on what you missed in the next class.

However, for most people, once you decide to stay away from class one week, the next week you feel even further behind (as well as embarrassed) and decide to miss again.

If you miss two weeks in a row, you will usually not return.

This exercise is an attempt to bring all these issues out into the open before students have to confront them alone and under pressure.

Steps

1 **Hand out *Confessions of a new student***

2 **Divide into small groups**

3 **Allow time for students to introduce themselves**

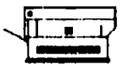
4 **Task is to discuss the questions on the handout**

5 **Circulate amongst groups, answer questions**

6 **Let discussion drift into gossip**

45 mins

Confessions of a new student



How did you cope with the copying?

- Did your arms get sore?
- Did you have to look three or four times at big words?
- Did you get bored?
- Did you understand it while you wrote it?
- Did it get easier as the week went by?
- Did your handwriting get worse as the days went by?

How did you organise yourself?

- Where in the house did you try to work?
- Which was the best place ? Why?
- When in the day did you try to work?
- Was it a regular time or did it vary?
- Did you have to experiment to find a good time and place to study?
- Which was the best time of day? Why?

How did those around you respond?

- Did they laugh? Or chuck off at you for copying?
- Did they take it seriously or treat it as a bit of a joke?
- Did they interrupt you?
- Because your routine changed did other people get a bit cranky?
- Did family pursue you, demand your attention, etc.?

How did you respond to their response?

- Did you feel silly?
- Did you feel guilty?

Speaking of feeling guilty, what did you do when you missed out on doing the speedwriting?

- Feel even more guilty?
- Tell yourself it doesn't really matter?
- Promise yourself to do double tomorrow?
- Feel sick and tell yourself that you really are as slack as you feared?
- Did you go around muttering about others because it was *their fault*?
- Did you find yourself starting a lot of conversations with, "If only..."?
- Did you feel ashamed to come back this week?
- Are you scared we will ask, "Hands up all those who missed their homework?"

Our talk notes

Organising your memory

- ## How is memory organised?

  short-term memory (paying attention)

  long term memory (storing)

- ## How do we gain new knowledge?

  transfer to long-term memory

  attaching new information to schemas

  bottleneck problem

- ## What does revision do?

  helps retrieval

  attaches knowledge to schemas

  tells you what you don't know

- ## What is the split-brain model?

  left and right sides

  importance of images and patterns

45 mins

Your talk notes

Organising your memory

- How is memory organised?

- How do we gain new knowledge?

- What does revision do?

- What is the split-brain model?

45 mins

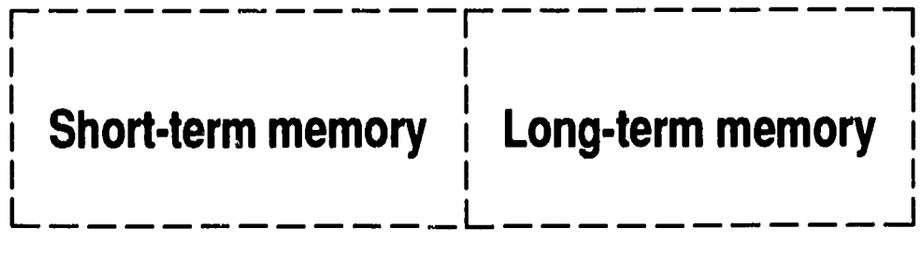
Organising your memory

How much can you learn?

You might think that being a successful student means just listening to the teacher and carefully learning everything that they say to learn. It would be easy if this was all there was to it. The reason why it is more tricky than this is that you can't learn very much at a time. I'll now explain why.

It seems that our mind is divided into two parts. Psychologists call them *short-term memory* and *long-term memory*.

- ***Short-term memory*** is the part of the mind that you use to consciously pay attention with. It is the conscious mind, the part of the mind that you are aware of. It is the part of the mind you are using to read this.
- ***Long-term memory***, on the other hand, is the part of the mind where you store things so that you know them in the future. It contains all the things that we know even though we are not thinking about them now. For instance, while you are reading this you are not conscious of lots of things that you know. You know what your name is, where you live, how to speak a language (or even more than one language), the words to some songs, how to ride a bike, how to walk, how to find your way around town, and so on. So, you know a lot of things without having to keep them in mind all the time. You do not have to go around saying to yourself, "My name is Malcolm Smith. My name is Malcolm Smith. I must not forget." You just know your name without having to think about it.

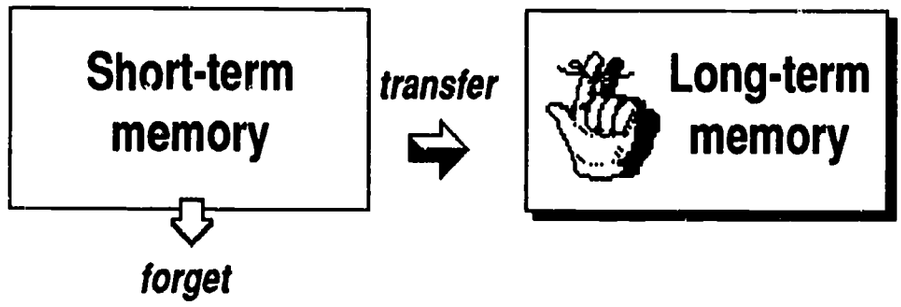


Two types of memory

Remembering and forgetting

Now there are lots of things we have attended to with our short-term memory which are not transferred to our long-term memory. You can be told someone's name but soon afterwards you can't remember it. So, although it was something you attended to and it was in your short-term memory, it is not in your long-term memory.

This is what we mean by forgetting. Actually, it may still be in your long-term memory — it could just be that you have no way of getting it out.



Remembering and forgetting

So, there are two problems in remembering:

- one is to get things into your long-term memory
- the other is to be able to get them back out again.

The key to remembering is:

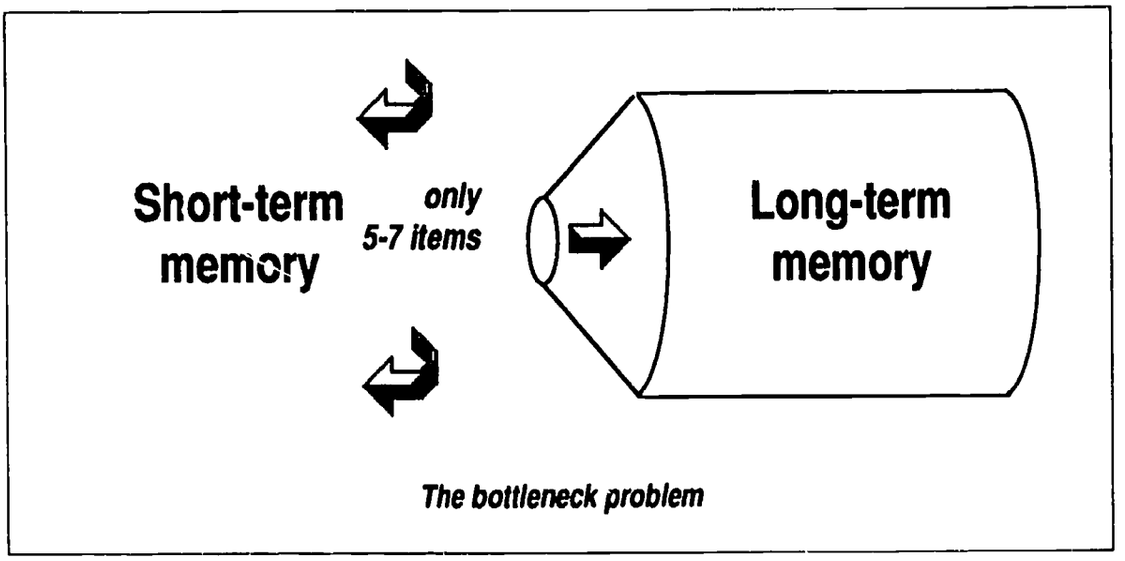
- How can you get things to transfer from your short-term memory to your long-term memory?
- How can you make sure that things don't just go in "one ear and out the other"?

The bottleneck problem

Only very few things that we are aware of can get through the narrow bottleneck into long-term memory. Why is this? Well, one thing that psychologists have discovered recently is that *we can only pay attention to 5-7 things at a time.*

This means that we can only transfer 5 things to long-term memory at a time. This means that after a burst of reading you will only remember 5 things; that after a class you will only remember 5 things; that you can only remember 5 things from a TV program.

So this poses a problem for us when we are learning new things. We must somehow try not to overload our short-term memory. We must pace things so that you are not trying to transfer more than 5 things in one go from our conscious mind to our long-term memory.



The bottleneck problem

For example, it is not going to work to try to concentrate carefully on everything a teacher says.

If we try to listen intently to every single thing a teacher says, or every single sentence in a book we are reading, we will simply overload our short-term memory and end up forgetting most of it. All we will remember, probably, is the first thing said and the last couple of things. Everything in the middle will just be a blank.

Main ideas

Revising with mindmaps

What is a mindmap?

In this session we teach students to take notes and do their revising with what we call a mindmap — a diagram which represents the relationships between a group of ideas.

Why use mindmaps?

Less threatening

The reason we teach mindmapping is that our students are very unsure of themselves as writers and this self-consciousness is an obstacle. So we do not want students to feel obliged to be trying to write out full sentences so early in the course. Because we will later spend a lot of time teaching writing, we want to make it clear that you can understand ideas and record them on paper without being a good writer first. Learning to write can come later. Because mindmapping is done only in terms of *key words*, it means that students do not have to worry about sentence grammar — they can just put down names.

Show relationships

Another reason we use mindmaps is that they show, in a very graphic way, that ideas are about *relationships* — that learning is not memorising sentences, but seeing the relationships between groups of ideas and the evidence (or facts). Mindmaps are good for making students work out how to relate several ideas to each other.

Central idea

The other feature is that the idea of importance or centrality is shown graphically on the mindmap: the closer something is to the centre of the mindmap, the more important it is. This means that eventually students come to realise that it is the issues, concepts and theories which are central to modern knowledge — not facts. Facts figure mainly as examples and illustrations.

Speed & revision

The other advantage of mindmaps is that they can be done quickly and roughly, so they are an excellent medium for revising. Students can dash off a mindmap in 2–3 minutes as a quick check of what they still remember. You can ask them to do this regularly during the course, and you can get them to do it for homework.

Drawing problems

Lots of students feel just as bad about their drawing as they do about their writing, so they will be reluctant to do mindmaps and very nervous about showing you.

It is important to make clear that *it is not important that they look nice or neat* or have terrific drawings in them. This is an added bonus. The important thing is that they diagram the key words for the topics covered by laying them out spatially in relation to one another. This is all that is required or expected. You should do some yourself and show how bad they are, just to reassure students that it is not the quality of the penmanship or drawing that is important.

Mindmaps and learning

Metacognitive value

From the point of view of learning, just putting down the key words drags ideas into short-term memory, thus *reinforcing schematisation* through depth of processing. And it is easy to see what has been forgotten, because it is not there on the page at all. So, mindmapping is a very transparent medium for being metacognitive and identifying the gaps in your memory or understanding.

Mastering ideas

By using mindmapping as a first way of *representing ideas*, students quickly feel that they are mastering the ideas themselves.

Of course, there is a huge gap between being able to jot down a few key words on a diagram and being able to write an essay or article about those ideas. Writing calls on a far greater range of skills and sub-skills. It also means that you need to have fully mastered the vocabulary and phrasing for expressing and talking about that set of ideas. But our point is precisely to separate the idea of understanding from the idea of writing at this stage. Ultimately, in academic discourse it is true that if *you can't write it, you don't understand it* — but this is for later.

Motivation

Achievement

We want students *to feel a sense of mastery* quickly. By using mindmaps, we provide them with a form of writing that includes no grammar, no verbs, and so on. It is closer to writing as a way of labelling things than it is to writing a full-blown text. In fact, the key words function almost as proper names; they *point* at regions of meaning, rather than spelling out in any detailed way the actual contours of that region of meaning. However, that is enough for our purposes at this stage in the course. To write the label "chunk big" and put a box around it and then draw a line to link it up "automate" may seem like a child's drawing — and it is, but it is also an important step on the way to being able to write "real writing".

Learning in stages

By using mindmaps for all the note-taking and recording in the class, this entire segment of the course can be done successfully by students without demanding that they be able to write at all. The only writing they are doing is the speed-copying. So, they are not expected to produce any sentences or texts of their own during these first weeks of the course. In fact, even the first essay they will later write will also be so fully-scripted and plagiarised that they have to contribute very little of their own. This is part of our fundamental strategy of trying to provide a course in which students can be taught and can learn how to write *during* the course, rather than it being implicitly assumed that they can already write — and that all they will get is some practice to improve.

By not expecting any original writing during this part of the course we find that we have almost no drop-outs; in fact the classes increase in size over the first few weeks as students bring along their family and friends to do it as well.

Delaying the writing of grammatical texts means that students can gain a lot of confidence before they face that challenge. It means they are beginning to experience what is being talked about in the classes:

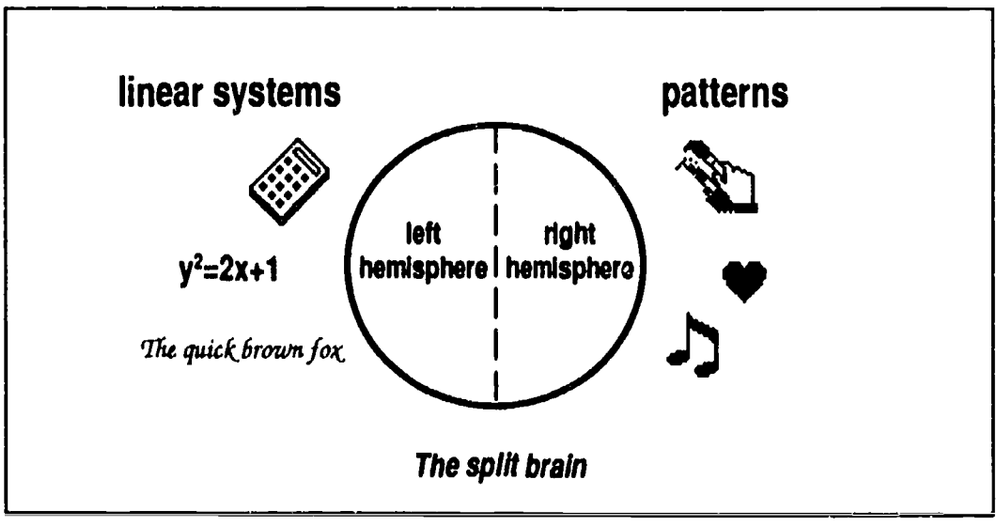
- *intelligence* is a matter of knowing how to do things and monitoring how you do them
- understanding is a matter of building up *schemas*
- *revising* means that you can remember more and more things
- each new idea you learn makes it easier to learn more, because ideas all seem to *relate* to one another
- *not knowing* is a sign of just that — you don't know — and not a sign of "stupidity" or whatever
- the solution is to *know that you don't know* and find out
- *practising* a skill leads to fluency.

So these are the reasons for using a proto-form of writing — a form of writing which is closer to drawing than it is to writing.

Introducing mindmaps: the split brain

To explain to students why we want them to do mindmaps, we introduce them to the notion of the split brain: the discovery that our brains are almost *two separate brains.*

These brains seem to operate on different principles. The left brain is principally responsible for language-processing along with similar digital semiotic systems such as maths and logic. The right hemisphere, on the other hand, is more pattern-oriented. It is not a matter of whether something is this or that, plus or minus, on or off; rather, it focuses on whether things are nearer or further from one another, higher or lower, brighter or darker. The right hemisphere specialises in processing shapes, feelings, melodies:



The split brain

Note:

There is some evidence that there is no short-term memory bottle-neck in the right hemisphere.

In an experiment in Canada, people were given up to 1000 pictures to look at for 18 seconds each:

- 200 of these pictures were selected and the people then had to distinguish

between the 200 they had already seen and 200 slightly changed versions of the originals
- researchers found that any section of the population could distinguish which pictures they had seen from the changed ones with over 90% accuracy

According to the view that our short-term memory is limited to 7 bits of information, this should be impossible. So this suggests that the right hemisphere does not have the same short-term bottleneck problem as the left digital-languaging hemisphere.

We explain to students that this means that the more they can represent their understandings graphically rather than in words, the more they will remember. It is easier to remember a diagram than a mere listing of words.

Our view is that it is important to have a revision segment at the beginning and end of as many classes as possible, especially at the beginning of a course. We have found that our past students never forget the ideas from these sessions — probably because of all the mind-maps they did in these revision segments. Years later at university, they still talk about how they are having trouble understanding the ideas in a course because they haven't yet built up good enough schemas; or they will talk about the cues the lecturer uses to signal importance.

At the beginning and end of all early sessions, have students do a mindmap as revision of either the course so far, or of that particular session,

1	First, without consulting their notes	3 mins
2	Then, by comparing with a partner	3 mins
3	Finally, by checking notes, asking teacher and others	3 mins

Hints

Make these segments short and snappy — 10 minutes at the most.

Sometimes we even reel off the minutes to hurry things along. If you can't remember something quickly then you don't remember it well enough. It is no good spending ages trying to retrieve ideas that are "on the tip of your tongue". If it is only on the tip of your tongue, you need to revise it. That is, the purpose of these sessions is not to find out what you do remember — but what you don't. So, the important thing is not what you do write down, but the comparison between what you write and what is in your notes — that is, what you didn't remember.

When they are comparing with a partner, encourage students to explain what they have written down to one another.

This means that they have to try to say what they have understood, but can do it in the safety of a non-threatening situation without the whole class listening. If there is embarrassment, wander out of the room a few times to make it clear that you are not listening or trying to overhear what they are saying to one another.

Try to retain short initial and final segments of revision with mindmaps in your classes for as long as possible into the course.

Admittedly, they will tend to get pushed aside by other things. But "spring" at least one every few weeks — right through to the end of your course. And insist that students do them for homework. Every so often, ask them to do a neat one at home and show it to you. Only if you consistently "cue" revising with mindmaps as an important task will students keep doing it, and so get into the habit.

It is not a pleasant thing to have to do. Let's face it: nothing is worse than having to sit down in front of a blank bit of paper and have to drag ideas out of your mind — inevitably you just feel tired, and totally blank. The only thing worse is having to sit down at a blank piece of paper and write with a deadline hovering over you.

Talk about the process of using mindmaps.

Draw some yourself. Notice that often you sit down and cannot remember even what the class was about; you are just absolutely blank. But even the tiniest glance at your notes brings it all flooding back. So, it was all there in your long-term memory; it was just that you have not developed an easy way of getting it up into your conscious mind yet. Revising is what will develop this.

Talk about:

- the uses of headings
- capital letters
- colouring
- little diagrams or drawings
- sometimes drawing a mindmap as quickly, roughly and untidily as possible; at other times taking care
- using mindmaps for revision purposes only, or using them to record ideas for later in the course (say, for exam purposes).

Because mindmaps are strange and new, it is important to give continuous and firm cues that

- they are *to be taken seriously*
- they are *an integral part of the course*

Teaching Cues

Provide regular times for mindmapping in class

Set aside 10 minutes at the beginning and end of classes for students to sketch a quick and rough mindmap:

- 3 minutes do quickly without looking at notes
- 3 minutes compare with another student
- 3 minute open notes, add "what you forgot"

Beginning of class — revise earlier classes

End of class — revise that class only

Provide regular homework

Ask students to neatly rewrite their

- class notes
- mindmaps

Announce early in course that you will look at students' notes and mindmaps

Midway through the course

- look at students' notes individually
- make suggestions for improvement

Provide models of good mindmaps

Photocopy or show overheads of

- good mindmaps by students (to show the rest of the group)
- any diagrams from books, articles etc.

In class:

- draw and use lots of sketches and diagrams yourself (the messier and more spontaneous the better)
- give permission for students to freely copy and imitate any models.

Activity guide

Mindmaps

Steps

1 **Have students close their notes and find a blank sheet of paper to work on.**

Decide whether they are revising the whole course so far or just a single session

2 **Tell students what main idea to place in a box in the middle of their page**

They then build out from this central idea to other ideas and examples.

Insist that the messier they are the better.

Allow 3–5 minutes for this.

3 **Tell students to compare their result with a partner**

They should explain what they got to each other

They should add bits they forgot to their own mindmap

Allow 3–5 minutes for this

4 **Finally, tell students to open their folders and look at any notes or handouts they have on the topic**

They should add anything they forgot.

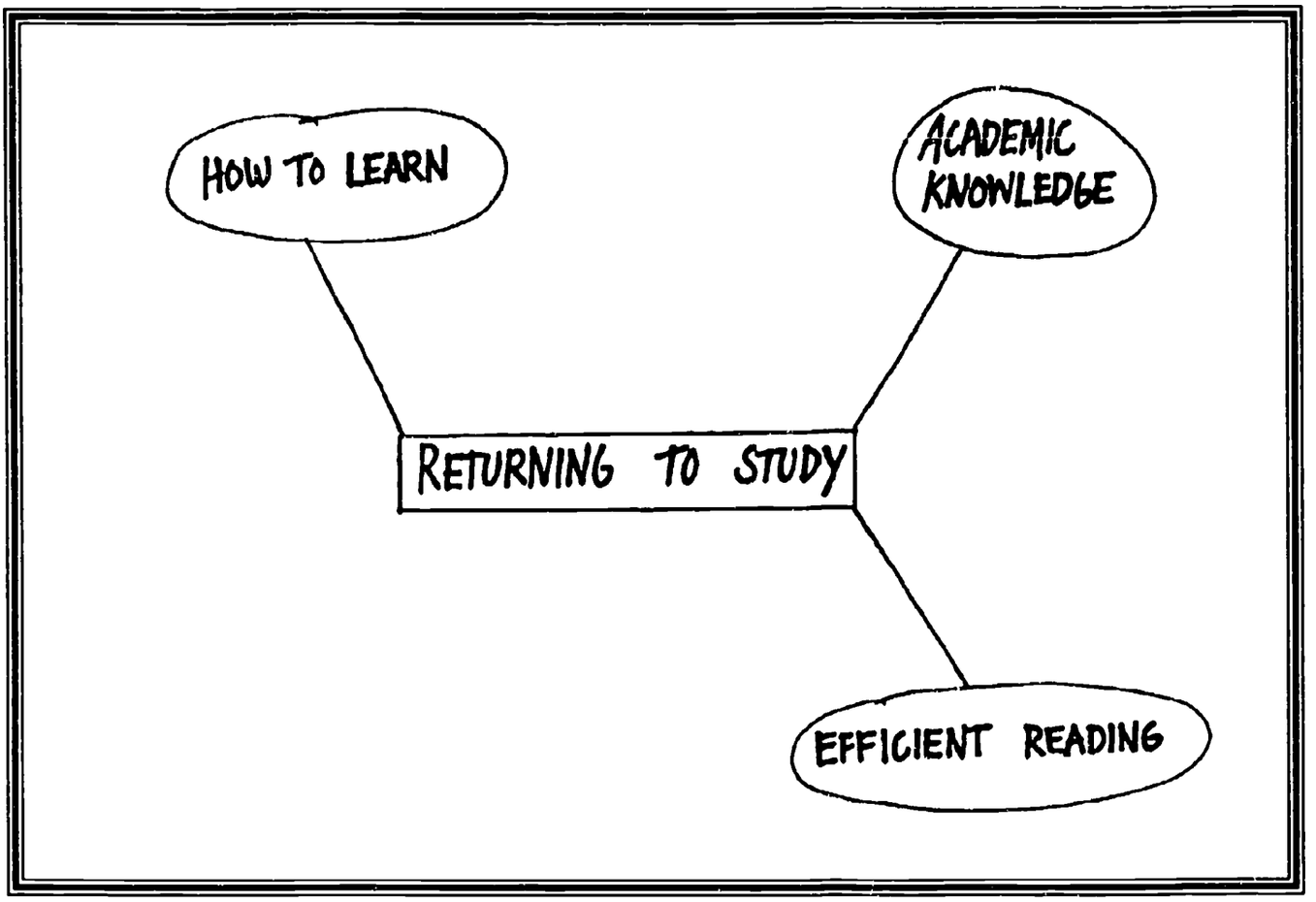
They should ask any questions about things they are puzzled by.

5 **Tell students to date their mindmaps and keep these rough-and-ready versions together.**

It is a good idea for them to re-do this mindmap neatly the next day as part of their homework.

20–30 mins

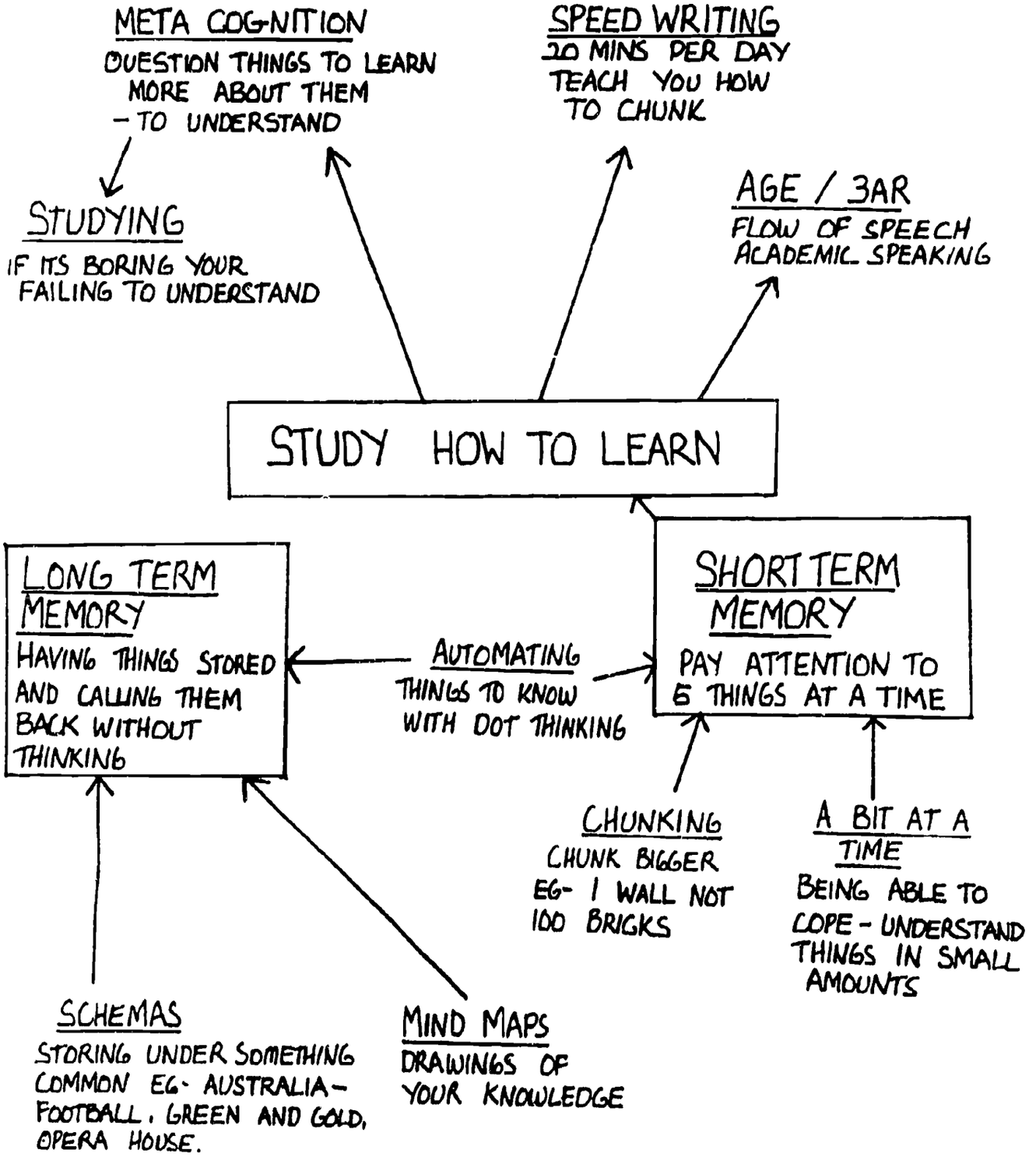
Sample blackboard mindmap



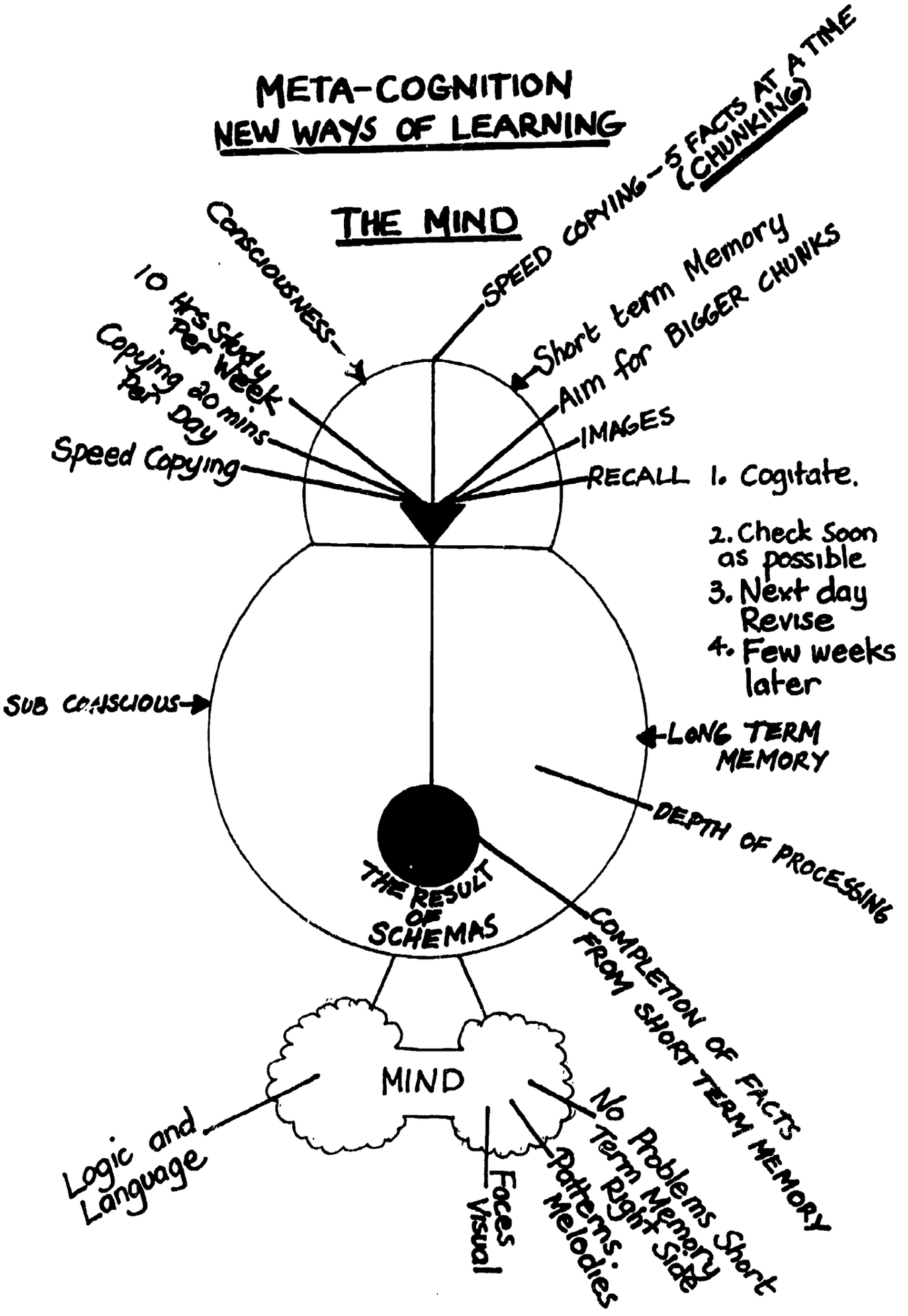
This is an example of the simple mindmaps we draw on the board to model the use of mindmaps for summarising and revising.

The mindmaps on the following pages, and at the end of Session 3, are samples of mindmaps which were drawn by students to represent the main ideas in these sessions.

Sample mindmap 1



Sample mindmap 2



Reflections on Session 2

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student.*

In your teaching do you...

- start right in on new material ☐
- spend time revising previous sessions ☐
- preview what the session will be about ☐

How do you yourself revise?

- by skimming your notes ☐
- by jotting down key words ☐
- by marking up your notes ☐
- by re-doing notes ☐

How do you remember ideas best?

- as words ☐
- as things you mentally layout and point to ☐
- as actions ☐
- linked to people ☐
- linked to places or pages ☐

You have probably had to learn some new ideas to teac. his course.
How did you do it?

- just let them blend into your existing ideas ☐
- jotted them down so you could look at them ☐
- thought about how they squared with your existing ideas ☐
- picked some key words or phrases ☐
- thought up some of your own examples ☐


Knowledge 3


hang on...
if we have to read
everything, how come
the exam's only two
pages long?!!

session 3

Summary

This session presents an overview of academic knowledge, and introduces the notion of the hidden curriculum.

	Read before class	*To take into class*	*Student handouts*
What is academic knowledge?	**Academic knowledge** ..... 123 An introduction to the main ideas about knowledge.	**Activity guide** ..... 124 Suggested steps for the class activity.	***Nature of academic knowledge*** ..... 125 An individual response sheet which is then used for group discussion
Cues & the hidden curriculum	**Main ideas** ..... 127 Summary of these two key concepts **Talk notes** ..... 133 Suggested approach to the class presentation	**Your notes** ..... 134 .	***The hidden curriculum*** ..... 135 This is the handout students use to guide the discussions at their table. Make at least two photocopies per table.
How academic knowledge is produced	**Main ideas** ..... 143 Explanation of why knowledge can be seen as a product of the system **Talk notes** ..... 75 Our suggestions	**Your notes** ..... 76 .	

session 3

Lesson plan

Review of Session 2

What is academic knowledge?

45 mins

Aims
to articulate student views on knowledge
to show through discussion that there are different views of knowledge

The nature of academic knowledge

Cues & the hidden curriculum

45 mins

difference between overt and hidden curriculum
three types of students
three types of teachers

The hidden curriculum

Break

How academic knowledge is produced

45 mins

What is intelligence?
Metacognition
Short term memory bottlenecks
chunk big; automate; a bit at a time

Homework

- **Mindmap of course so far**
- **Continue speed copying**
- **Listen to radio**

Your notes for Session 3

Academic knowledge

The overall aim of this session is to help students realise that knowledge is produced and distributed in a messy way.

As a rule, students begin the course with the idea that academics know and agree on the Truth, and that going to university is a matter of "learning the truth". This segment tries to demonstrate that things are not that simple.

True/false exercise

We begin with the true/false statements in the handout, *The nature of academic knowledge*.

Students are asked to respond to each statement individually, and then, to form pairs or small groups and try to reach a common agreement with their answers. This provides a forum for students to explore their beliefs about what knowledge is.

Even though many of the statements are deliberately ambiguous, we conclude this activity by saying that they are all false and that we can return to look at them again after the following explanation concerning how knowledge is organised in higher education.

Disciplines

The first thing we point out is that *Knowledge* is divided into *disciplines*. But this does not just mean that different aspects of reality are parcelled out to different disciplines, so that

- Biology deals with bodies
- History with the past
- English with literature
- Architecture with building

and so on. We point out that disciplines are defined not so much in terms of *what they deal with*, but in terms of *how they approach things*. This means that the same area of reality can be approached in different ways by different disciplines. For example, most of the humanities or Arts disciplines compete with one another in "explaining and understanding what human beings are and how they live together".

Separation of knowledge

Practically, this means students must realise they cannot use ideas from one discipline in another one. We probably all have anecdotes about occasions when we misunderstood where the boundaries were and used ideas that were rejected by a particular discipline. I can remember in my first year at university how I used ideas I had learnt in Philosophy in a Psychology exam — and failed. Students are usually horrified by these anecdotes. It seems scandalous that there should be competition or differences within the House of Truth, just as we might feel a sense of scandal that the Churches are divided and reject one another.

Activity guide

What is academic knowledge?

The aims are to draw out the students' views of knowledge, and show through group and whole-class discussion that there are differing views of what knowledge is.

Steps

1 **Arrange students into small groups (orpairs)**

2 **Hand out *The nature of academic knowledge***

3 **Students complete the true/ false exercise individually**

4 **In groups or pairs try to reach agreement on the answers**

This provides a forum for students to explore their beliefs.

5 **Whole group discussion of the results**

6 **Sum up**

Conclude by saying that all the statements are "false", and you will return to look at them again following the explanation of how knowledge is organised in higher education.

45 mins

The nature of academic knowledge

Your task

Consider the following claims, and then enter a "T" for True or "F" for False in the space at the beginning of each line.

_____ A good student is someone who does all the work given by the teacher.

_____ A bad student is someone who takes short-cuts.

_____ A sure way to be prepared for an exam is to be familiar with all the reading required by the course.

_____ The world is like a jigsaw puzzle: the knowledge produced in each subject must agree with the knowledge produced in all other subjects.

_____ Expert historians all agree on why Australia was settled.

_____ Because Jesus lived 2000 years ago, we know less about him today than people did 1000 years ago.

_____ People only disagree with one another because they don't know all the facts: if they all knew all the facts, they would all agree.

_____ The study of psychology helps you understand yourself.

_____ As a result of recent developments in Developmental Psychology, we will soon know the right way to bring up children.

_____ The main aim of academics is to produce a True Theory.

_____ Teachers never teach theories they don't believe in or think to be true.

_____ In an essay, your job is to express what you really think as clearly as possible.

_____ From your essays teachers are able to judge your level of understanding.

_____ In academic study, originality is expected and rewarded.

_____ Eventually, through study and research, human beings will discover the Truth about themselves and the world.

Cues & the hidden curriculum

The concepts of the hidden curriculum and cue consciousness reinforce to students that they must be on the look-out for the underlying schemas and concepts organising a course.

Rationale

Why tell students about the hidden curriculum?

The notion of the hidden curriculum is liberating for students because it explains why there always seems to be too much material to take in during a course and gives them permission to make judgements about what to spend time on, what to concentrate on, and what to selectively neglect.

However, there are obvious risks involved in selectively neglecting aspects of the course. What if you neglect the wrong bits? And how do you ensure that you are concentrating on the central components and giving less time to the peripheral elements of the course?

Why tell students about cues?

The concept of teacher cues is introduced *to give students something to focus on* when trying to figure out the core components of a course, rather than just guessing. It points to the meta-discourse (cues) of the teacher concerning:

- the course as a whole
- the way the course fits together
- the way the unfolding elements of the course link together into an intelligible whole
- or the way they flow out of one another, counterpoint, or comment on one another.

Cues

Why students don't notice cues

Most students do not notice this meta-discourse by teachers, because their initial concept of knowledge is that knowledge consists in a collection of specific facts or skills and so any contextualising just seems like abstract waffle to them. Usually they just tune out and wait for what they think of as the important concrete facts or skills.

It is not only opening or closing statements which summarise — any *transition* does. In general, we can say that the most incisive statements in a course are at the points where the coherence of the course is most at risk.

These points are the transitions between major shifts of topic or focus, which can come at the beginning, end or even during classes or segments.

Cues: speech equivalent of written meta-discourse

Later, when the notion of the *meta-discourse* within expository text is introduced students will realise that the cues of a teacher are identical to the meta-discourse within an academic text. They are the signalling, organising statements which relate elements of the course, which assign relative

importance, and which signal how the collection of topics within the course all relate to one another.

Body language: cues to attitude or cues to content?

Gregory Bateson has pointed out that the *evaluative* component — an inseparable aspect of meta-discourse — is often communicated, not in the actual words or content of what is said, but in the tone. This is the reason why body language and paralinguistic phenomena are included under the rubric of *cues*. Whether or not something is important or subsidiary is often signalled by a facial gesture, a shrug of the shoulders, by turning away, and so on.

The reason for classifying body language and paralinguistic features as cues is not that students are unable to read non-verbal cues. In fact, students are highly adept at reading such cues in their everyday social relations. Especially with the advent of television, students have become highly skilled at reading the emotional and interpersonal significance of body language, as this is the medium of all drama on television.

However, because they have learnt to read this body language within the framework of interpreting the emotional and power relationships in the narratives of the screen, they have not learnt to read them as giving cues about the underlying conceptual structure of content. That is, they read gesture as symptoms of affect rather than cues of ideas. In the classroom they will interpret a dismissive tone as the teacher being impatient with a particular student rather than as being annoyed at having to focus on something relatively peripheral to the main concerns of the course.

Students tend to focus on the issues of:

- who the teacher likes
- who the teacher hates
- whether the teacher is in a bad mood today

rather than on what cues the teacher is giving about the structure of the ideas underlying the course.

Students interpret the teacher as simply a person engaged in social relationships within the room. They do not realise that what is structuring the classroom is not only the personal attitudes and feelings of the teacher as an individual, but also the larger agenda of a discipline.

Only when students begin to view the teacher as mediating a discipline, a body of knowledge or discourse can they learn to distinguish between when teachers are expressing a personal voice and when they are expressing the voice of the course or discipline.

The classroom's multiple agendas

An advantage of making the concepts of hidden curriculum and cue consciousness explicit to students is that this shifts the focus of the meta-framing of the classroom (by both students and teacher) from the contingent social relations of the classroom *to relations of ideas*.

Attention is shifted away from the social control and power struggles within the classroom. This is not to deny that there is a politics of personal relations, sexual relations or class relations enacted in the classroom, but to insist that these are not the only reality of the classroom. Many discourses

are present in the exchanges within a class, so any particular utterance can be interpreted or framed from any of these perspectives. Each remark as it were carries a range of discourses and there is a tug of war over which framing can be made to stick, which framing should be the dominant interpretation of an utterance.

By making explicit to students how the pedagogic framework interprets the exchanges within a class, the polarisation between students and teacher is undercut so that, for example, there is less chance that teachers can interpret their own speech and actions as helping students to understand something while students interpret it as "picking on someone" or as "being bossy". Because the pedagogic framing has been made explicit to students, there can be a common, shared framing of what is taking place in the classroom.

This mutual framing can then be invoked either explicitly or implicitly by teachers, and students will be in a position to read cues as cues. This means that the "wink-wink nudge-nudge" meta-framing that is mobilised to interpret the cues within the class will not all focus on personal and social relations, but will include the conceptual framing of the course itself.

Who's watching who?

By alerting students to the cues which realise the meta-framing and high level conceptual structures of a discipline, students are also released from an attitude of passivity into one of active control of their learning.

All too often students feel that teachers maintain a monopoly of the pedagogic discourse within the classroom and that the only way they as students can assert their presence within the class is by activating other discourses — the discourses of personal relations, sexuality and so on as forms of resistance. They feel that there are only two stances they can take up within the classroom — either as active resisters, or as passive "sucks".

By pointing to the existence and significance of teacher cues, the power balance in the classroom is subtly shifted: students can now feel that it is they who are reading the teacher, rather than only the teacher who is reading them — that they are monitoring the teacher, rather than just the teacher monitoring them. So, in some sense, they possess an interpretive authority in the classroom. The monitoring within the classroom is not just the teacher monitoring the understandings, attention and work of the students — the students are also monitoring the teacher. The role of the *primary knower*, as it were, has shifted from the teacher to students.

Students often experience a renewed sense of potency and power with the realisation that they can monitor a teacher for hints, for what lies behind what is being said or done, and more significantly for the unintended cueing by teachers. Students can now listen to teachers for the times when they "give themselves away", when they unwittingly give off cues. Thus, students are reinvested with the power to interpret rather than just passively submit to the interpretation of the teacher, and this power to interpret can now be enacted in terms of the course goals — not just in terms of personal or petty institutional imperatives.

Control talk or cue talk?

Psychologically, there is a big difference between hearing, " Now, this is important, listen carefully" as a command, and hearing it as a cue. Students

tend to interpret the talk that surrounds "content talk" as "control talk", whereas a lot of it is in fact "cue talk".

Students need to be able to distinguish when this surrounding talk is just social or institutional control and when it is cue talk. The problem is that the very same utterance carries both dimensions or discourses. Students need to be able to extract the cue dimension and focus on it.

This problem of how to interpret these contextualising statements is worse for students who think of knowledge as an additive collection of facts or skills rather than as a constellation of perspectives and concepts. Because they think of the content as a simple collection of facts, they interpret all the meta-commenting and contextualising as irrelevant to the course itself and therefore as simply control talk. They don't realise that a lot of this meta-discourse in fact carries the real meanings of the course. While they are sitting there thinking "When are we going to get on with it?" the teacher has in fact been articulating the higher-level conceptual framework as a context for that particular session.

What does all this mean for our practice as teachers?

General hints

- give cues
- make meta-comments on your own cues
- exaggerate and send up your own cueing

Give cues about the importance of cues

One way to reinforce student awareness of cues is to give them with a range of emphasis. Sometimes you will give an exaggerated cue; sometimes with humour; sometimes as if you have absolutely no awareness that you are giving one. Usually, you will give them unwittingly as you will be concentrating on what you are saying. Probably the only "rule" would be never to give them as a simple commands, because this reduces students to passive enactment of a command. *Students must retain responsibility for reading and using cues.*

Compare cues

The fact that something recurs is in itself a cue to importance, so you should bring cues to the foreground every couple of classes by allowing students to compare the notes they have been taking and checking their sense of the important ideas in the course so far.

Predict the exam

If there is an exam at the end of the course, you could get students to regularly try to predict what they think will be in that exam. As always, the aim of these activities is to force students to shed unimportant detail so that they can see and focus on the core ideas and skills of the course — its hidden curriculum. The very idea of predicting exam or text items (except as a form of inspired guessing) is often quite preposterous to students: that it can be done systematically and checked is something they can only learn by actually doing.

Compare the cue styles of different teachers

You can encourage students to make explicit the cueing styles of different teachers. Most have favourite cues that they rely on. Students can discuss and compare their impressions of which cues different teachers tend to favour.

Teach only 5 chunks at a time

Try to organise your material so that students do not need to remember more than 5 things at a time. If students know that there will be a framework to the class that is within the bounds of short-term memory, they will be more inclined to be on the look-out for it.

Give summaries and overviews

Consciously use *look-backs* (summaries) and *look-forwards* (overviews) to help them grasp the higher-level framework shaping the course.

Model the use of cues

Model the use of cues by helping students become aware of the cue structures used in texts. As students become more aware of the linguistic forms used to structure written texts they will notice these same forms being used in the speech of their teachers.

A checklist of cues

- Repeating things
- Repeating something very slowly so that it can be noted down in writing, word-for-word
- Re-positioning — standing up, moving closer to the class, closer to the board, closer to the middle of the room
- Talking more quickly, or louder, or with more emphasis
- Using particular hand gestures
- Looking at particular students
- Writing or sketching something on the board
- Repeating a particular idea or word
- Saying students *must* know something or be able to do something

Ways to undermine cue-consciousness

- Mention cues once only in a very heavy-handed way
- Never mention them again
- Be oblivious to your own cues
- Allow no time for discussing or analysing cues
- Treat all prediction as cheating
- Constantly tell students to just do what they are told
- Treat everything as equally important so that the trivial is indistinguishable from the central
- Demand the rote learning of large amounts of useless information
- Never give any summaries or overviews yourself
- Don't think about what the core concepts or skills of your course are yourself
- Just treat it as an endless set of disconnected items to be learnt
- Use test formats that ask for single sentence answers.
- Ask questions that test for rote learning not for understanding
- Ask lots of trick questions and obscure questions
- Don't ask about the important things — they are too obvious and everyone will know them

Discussion points

- What are the phrasings, gestures you use to signal the importance of something?
- How do your classes begin?
- Do you summarise at beginning and end?

Our talk notes

The hidden curriculum

- **Difference between overt and covert curriculum**

  overt curriculum cannot be completed in a single year

  covert curriculum can be completed

- **The three types of students**

  cue seekers

  actively monitor cues

  cue aware

  aware of clues but too guilty to use them

  cue deaf

  unaware that clues are being given

- **The three types of teachers**

  cue givers

  want students to know what they need to know

  cue hinters

  want to tell, but not sure if they should

  poker-faced

  see it as the student's "job" to guess what's "in the teacher's head"

Emphasize that successful students shape their studying efforts in light of what is central to the course and the course requirements.

45 mins

Your talk notes

The hidden curriculum

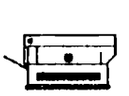
- Difference between overt and covert curriculum

- The three types of students

- The three types of teachers

45 mins

The hidden curriculum



Review

So far we have covered three points:

- *intelligence* is doing things intelligently — being metacognitive
- *remembering* is getting things into your long-term memory by automating, chunking or slicing
- *revising* is bringing long-term schemas back into short-term memory.

Memory is not enough

Because you now know about metacognition and how to manage your memory, you might think, "All I have to do now is listen to what the teacher tells me and be metacognitive". It would be nice if things were that easy. Unfortunately, they are not.

Years ago some researchers found that teachers consistently assigned far more work than was realistic — they calculated that to do all the work expected in a 1 year course would take 5 years. This means that if your definition of being a good student is doing everything your teacher tells you, then you are in trouble. *It is physically impossible to complete all the work they suggest.*

Being organised and efficient is not enough

One popular solution to this problem is to tell students about *time management.* The idea is that if you were more efficient with your time, if you were more organised, if you knew speed-copying, then you would be able to get through everything.

However the truth is that no matter how organised you are, no matter how much of a "superstudent" you are, no matter how carefully you plan your day, it is physically impossible to get through everything suggested by teachers. If you do try to do all the things in the *overt curriculum*, what will happen is that you will have to do about 5 times as much as you need to:

- you will study extremely long hours
- long before the end of the year you will be exhausted
- you will get sick — or drop out
- your study techniques will be poor.

Because you are always forcing yourself through will power, you will study inefficiently. You will:

- fall asleep over your books
- use rote-learning strategies
- daydream at your desk.

Eventually, you will become exhausted and disillusioned. You will then either drop out or lose your enthusiasm for the subject.

So, trying to do everything teachers tell you is not a strategy for success.

What's the secret?

What, then, is the solution? How is it possible to get through a 1-year course successfully if it seems to require 5 years of work?

The solution, according to the researchers, is to realise that there are two curricula, two sets of tasks you are asked to do by teachers:

- *What teachers suggest you should do*

  This is what the researchers call the **overt curriculum**. It is the public curriculum, the one you are told about.
- *Things you actually have to know and learn*

  What you must know to get a top result they call the **hidden curriculum**.

You can now see why you can't just do what the teacher tells you — because she is telling you the overt curriculum, not the hidden curriculum.

Why don't teachers tell us the hidden curriculum?

There are a lot of reasons why they don't:

Topics

One reason is that usually a course is organised so that it covers a topic. For example, a first-year History course might be called "Europe: 1789–1945". But there is absolutely no way that all the important things that happened between 1798 and 1945 in Europe can be studied in depth in the space of one year. Each of the 25 topics within this course could be studied for a whole year on its own. In fact, scholars spend their whole lives studying just a very small selection of these topics.

So, in this sense, there is always more you haven't read and thought about than you have. The number of unread books always far outweighs the books you have read and considered — yet teachers still feel obliged at least to give a full listing of all the relevant books and ideas.

Survey courses

Most courses are *survey courses*. That is, they emphasise breadth rather than depth; they do not examine a single topic or author or idea in depth, but instead aim to give an overall coverage to the range of ideas or topics contained within a subject.

To give you an idea of a course that did concentrate on depth to the total exclusion of breadth, I once did an honours course in philosophy which met for 4 hours a week for an entire year and in which we got through only 14 pages of the 200-page book we were supposed to study. Such a course is definitely not a survey course. However, most courses will cover a new topic and a new set of readings each lecture. These are classic survey courses. Survey courses skim over a lot of territory quickly. Inevitably there are more topics, more ideas, more authors, more content than anyone can take in. So, as a student, you have to be selective.

As a student you have to decide how to balance depth versus breadth as well. Short-answer questions make sure you are not too selective, but essays and exams can allow you to select your areas for deeper study.

Teachers have to cover all the options

Teachers do not have insight into the exact state of each student's schemas. So they have to err on the side of conservatism. From their point of view, it is better to give you extra work in the hope that it will sink in. So, even though there may be only a few central ideas in the course, they will still provide as many different avenues for approaching these central ideas as possible.

Understanding is a matter of "something clicking" and teachers cannot know how or when that will happen for different students. Two students can read the same book. As a result one student will come to understand a lot of things while the other student might learn very little. Which happens will depend on what schemas they already possess. But the teacher has to assign work for the bulk of students. One student may get onto an idea quickly, while another may need extra reading, extra practice. One may need to discuss the idea ; one may need to come across it in different books.

Because teachers cannot look into your brain and see the exact state of your mind, they cannot assign the exactly right amount or type of study you as a unique individual need. Only a lengthy period of individual discussion and assessment over a long period of time could enable them to pinpoint exactly what it is that you need to work on and the exact order in which you should work on it. All the teacher can do is give general guidelines that seem to vaguely cover all students; they cannot tailor assignments or homework for the exact requirements of individuals.

So only you can decide what and how much to do.

You have to be metacognitive and be the one responsible for assessing the gap between what you know and what you need to know. The teacher's knowledge of your individual case through your assignments or tests is too crude.

Student decisions

So we now have another problem for you as a student. Even though you may be efficient at monitoring your chunking and schematising, what are you going to do when teachers give you miles too much work to do? How do you decide:

- what to study and what not to worry about
- what is important (central to the course) and what is just an unimportant detail
- what will be on the exams
- what the essay questions will be
- what books to concentrate on
- what authors to focus on
- which topics are the most important
- which concepts are the most crucial
- how to go about an assignment
- how important it is
- what to spend time on
- what to make sure you definitely understand fully and what to just skim and have a vague idea about
- which books to make sure you get hold of
- which articles to photocopy so that you can study them more carefully
- which essays to do
- which areas to study for the exam
- how much time to spend on various topics

Cues

Can we find out what the hidden curriculum is?

If you cannot rely on the teacher to tell you what sort of and how much homework to do, if you can't rely on the teacher to be your metacognition, how are you supposed to know what you need to know?

There is a paradox here. If you knew what you needed to know, you would already know it and would not need to be taught. So, you can't know at the beginning of the course what you will only learn as a result of doing the course. At the beginning of the course it is only the teacher who knows what you need to learn during the course.

Cue consciousness

We have already met some of the signs of a student not knowing the hidden curriculum while we were looking at metacognition. They include boredom, confusion and attitudes such as:

- I can't see the point.
- Where is this all heading?
- What's the connection between all the things we have done so far — it's all just a jumble of random facts

Remember, you are trying to find the powerful overarching schemas that hold the whole subject together, not trying to learn off hundreds of isolated facts. What are the principles or concepts which you need to master to enable you to deduce the rest?

Now we come to another way of knowing what it is you need to learn in a course. These are the *cues* given off by the teacher. Some researchers following up the idea of the hidden curriculum asked this question:

> How is it that good students can work out the hidden curriculum from the overt curriculum? If the overt curriculum is impossible to get through in one year, and would take about 5 years to complete, obviously there must be some way that good students can work out what the hidden curriculum is — a curriculum which takes only one year to complete?

They interviewed a range of students doing a medical course at a Scottish university. What they found is that they could classify students into three groups.

Types of students

Cue seekers

Cue seekers are students who realise that the teacher is constantly giving hints about what is important, central to the course and what is just an unimportant detail. Cue seekers are constantly on the look-out for these cues to help them decide what to concentrate on in their studies. They even check these cues out by questioning the lecturers; by noting what the teachers get enthusiastic about, and also what they tend to ignore.

Cue aware

The cue aware students are students who are aware that the teacher is giving cues or clues to what is important (what will be on the exams, what the essay questions will be, what books to concentrate on, what authors to focus on, which topics are the most important, which concepts are the most crucial) but they feel guilty taking advantage of this knowledge. They think it is cheating or taking immoral short-cuts to use this information so they still tend to do extra and unnecessary work.

Cue deaf

The cue deaf students are completely oblivious to the fact that the teacher is giving cues about what is more important. They just keep their nose to the grindstone and try to slog their way through everything as if everything was of equal value, equal importance. They have to study everything. They have no idea what the underlying structure of the course is, and they don't try to find the underlying ideas or problems which shape the subject. They just study everything and hope that they will be able

to remember it all in the exams. They don't even realise that they are expected to be selective in what they study, or in how much time they spend on different aspects of the course. These are the students who either end up exhausted from studying too long, or, if they do get to the end of the year, come out of the exam saying that none of the things they had studied were on the exam paper.

The cue seekers, on the other hand, study only a selection of the things in the course and yet they were all on the exam because they have used the cues given by the teacher to work out which are the central ideas of the course. They know that it will be these things which are tested in the exam.

So what?

What these researchers found is that:

- the cue seekers got top marks
- the cue aware got average marks
- the cue deaf either failed or just scraped a pass

Types of teachers

Teachers and cues

The researchers then turned their attention to the teacher and they were able to distinguish three types of teachers corresponding to the three types of students.

Cue givers

There were *cue givers* who openly told their students what would be in the exams — they would even hand out the exam paper beforehand. These teachers figured that they wanted all their students to pass and that there should be no trickery — students should be given as much guidance as possible.

Hinters

The second type of teacher we can call the *hinter*. Such teacher want to give as much guidance to the students as possible, but feel guilty about it. They are unsure whether they should give too much away, so they tend to give indirect hints. They will say things like, " I hope you have had a look back at such and such" or (when they are explaining something near the exams) they will say, "For example, take such and such".

Cue seekers and (to some extent) cue aware students know that these are cues as to what will be on the exam paper.

Poker-faced

The third type of teacher we can call *poker-faced*. These teachers believe that it is their job not to give the slightest clue to students about what is on the exam paper.

In fact, they pride themselves on giving nothing away. They may even try to give out misinformation — that is, to give out misleading cues. However, the most surprising finding of the researchers is that cue seekers still know what is going to be tested — even with poker-faced teachers.

This means that it is impossible for teachers to hide what they think to be the important ideas or topics they are teaching. Their gestures, their body-language gives them away; the emphasis of their voice gives it away. And these paralinguistic cues are not fully under conscious control.

Summary

Most courses cover far more information than it is possible to study, let alone take in and remember. Your task as a metacognitive student is to use teacher to decide what are the important, the central, the underlying schemas holding the course together and to concentrate on these.

You will also use cues to decide:

- how to go about an assignment
- how important it is
- what to spend time on
- what to make sure you definitely understand fully and what to just skim and have a vague idea about
- which books to make sure you get hold of.
- which articles to photocopy so that you can study them more carefully
- which essays to do
- which areas to study for the exam
- how much time to spend on various topics.

Main ideas

How academic knowledge is produced

The aim of this segment is to help students appreciate that knowledge is produced and distributed by institutions, that knowledge does not fall from heaven, that it has a history; that it changes; that it is full of disputes; that it is human.

Knowledge at school

Memorising facts

The concept of knowledge encountered by students in primary school is what we could call the *encyclopaedia view of knowledge*. It is the idea that the world is made up of things and that knowledge is listing the properties of these things. This view of knowledge is embodied in the non-fiction books used in primary schools which are about such things as Dinosaurs or Rain or The Romans.

This view of knowledge as consisting in the learning and memorising of facts is reinforced by game shows on TV where competitors use their memory to beat other participants to answer isolated questions. Game shows never ask for explanations, only for isolated facts.

It is also reinforced by comprehension questions which usually ask for an isolated fact.

According to this view, the meaning of learning is to memorise as many facts as possible. The more intelligent you are the more facts you have learnt and are able to learn — that is, commit to memory.

This view of knowledge is then mirrored in the sort of writing expected of students. They are expected to write reports or projects which list the properties of something in some conventional schema. At least this produces a coherent text which, unlike a game show, is longer than just an isolated sentence. And at least students are learning a set of categories for organising facts or information about various phenomena.

Knowledge as looking

Common to both these views is the idea that knowledge is a sort of looking, that one just *sees* a fact. There is a complete unawareness that a set of concepts has to be forged to produce knowledge. The game shows refer to encyclopaedias as a godlike authorities, just as the primary school texts simply present the facts, maybe mentioning who discovered them.

Both views erase the fact that

- facts are embedded in conceptual frameworks
- these frameworks are a matter of dispute.

Both erase the knowledge that what is of interest is the framework, not just the isolated facts.

The role of facts

Certainly it is true that there are a lot of things which have to be learnt by children being initiated into the knowledge possessed by a modern society. It is even appropriate that a lot of this knowledge is committed to memory.

The strict progressivist view — that any rote-learning is an alien imposition,

and that all learning must be motivated from within the experiential meanings of the child — is misguided on two counts:

- first, it means that learning will be slow
- second, it leaves the question of what will be learnt to the random personal experience of the student — which means that students whose social lives are marginal will only explore marginal meanings.

Knowledge in Higher Education

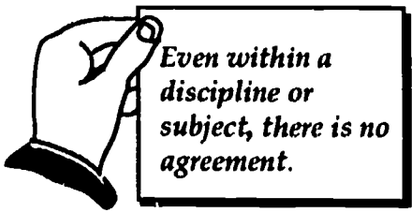
Disciplines

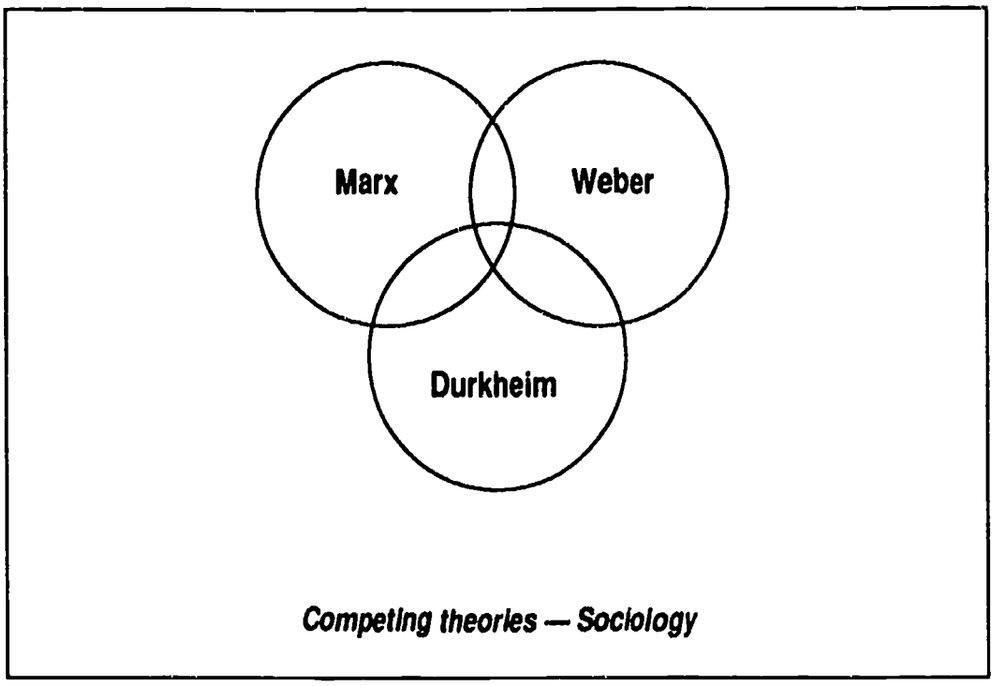
In the first part of this session we have introduced students to the notions that

- knowledge is divided into disciplines
- disciplines are defined not so much in terms of *what* they deal with, but in terms of *how they approach things*.
- there is competition between the disciplines

What is an academic discipline?

However, things are even worse. Even *within* a discipline or subject, there is no agreement.



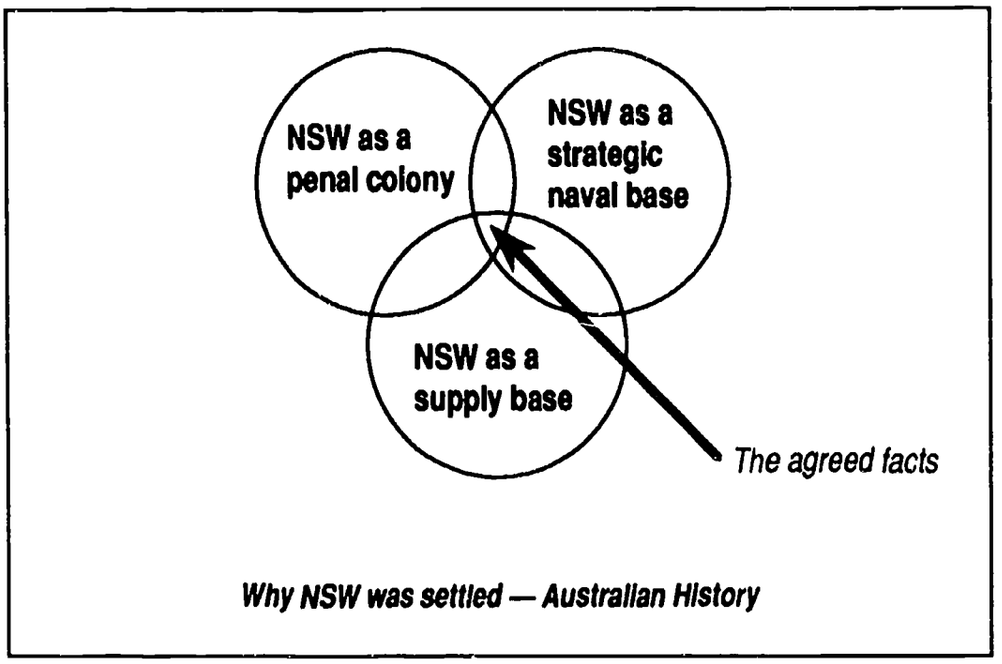


Competing theories — Sociology

We define a subject or discipline as a cluster of competing theories or approaches.

Thus, the only agreement between these theories is that it is productive to keep arguing with one another. They do agree on a few low-level facts, but disagree radically about

- how to interpret these facts
- what they mean
- how to account for them.



Why NSW was settled — Australian History

For example, in Australian History there is agreement about when NSW was settled, but there is not agreement about why.

The traditional view is that Australia was settled as a penal colony to handle the overcrowded jails and prison hulks in Britain. However, another view is that NSW was settled primarily as a naval base, and that the convicts were just to provide labour.

Sciences and text books

We point out that there is an important difference in how disciplines first present themselves to students. Those subjects which think of themselves as sciences will tend to be taught from a single textbook which pretends that the differences between theories within that discipline are not very great; that there is more agreement than disagreement; that the areas of disagreement are fairly minor.

We also point out that in later years, even in these subjects, it will become clear that it is the disagreements which are more fundamental. Even in sciences, there are competing research programs with fundamentally different approaches to the same reality.

One Truth — or lots of theories?

Finally, we point out that even though our instinct is to think that the more we find out, the closer we must be getting to knowing the final Truth, in fact what is happening is that there are more and more disciplines, more and more theories.

What's the point?

By the end of this session students should be saying:

What's the use, then?
Why go back to study?
How can we learn anything if they all disagree with one another?

Our talk notes

How knowledge is produced

Aim is to demystify the nature of universities and explain how they work.

- **Higher Education is an *institution***

  organised according to set of rules

  role of research

- **There is a pecking order for producing new ideas and facts**

  new ideas take time to trickle down the hierarchy

  undergraduate courses are based on "old" ideas and theories

  in Humanities these are often the founding or classic texts

- **Academic knowledge is divided into Disciplines**

  the mistrust between disciplines

  students must separate out the different ideas and approaches

- **Disciplines are made up of competing theories**

  no agreed body of "knowledge" or "facts"

  the facts are the agreed testing ground for competing views

  disciplines which have pretensions of being "sciences" hide dispute, and present themselves as having an agreed body of facts to be learnt

- **There is a proliferation of new disciplines and new knowledge**

  example: linguistics since the 1960s

  modern knowledge is not moving towards a single Truth, but towards a plurality of disciplines and research programs

45 mins

Your talk notes

How knowledge is produced

Aim is to demystify the nature of universities and explain how they work.

- **Higher Education is an *institution***

- **There is a pecking order for producing new ideas and facts**

- **Academic knowledge is divided into Disciplines**

- **Disciplines are made up of competing theories**

- **There is a proliferation of new disciplines and new knowledge**

45 mins

Reflections on Session 3

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student.*

Which of the three types of student were/are you? (Note down your "evidence").

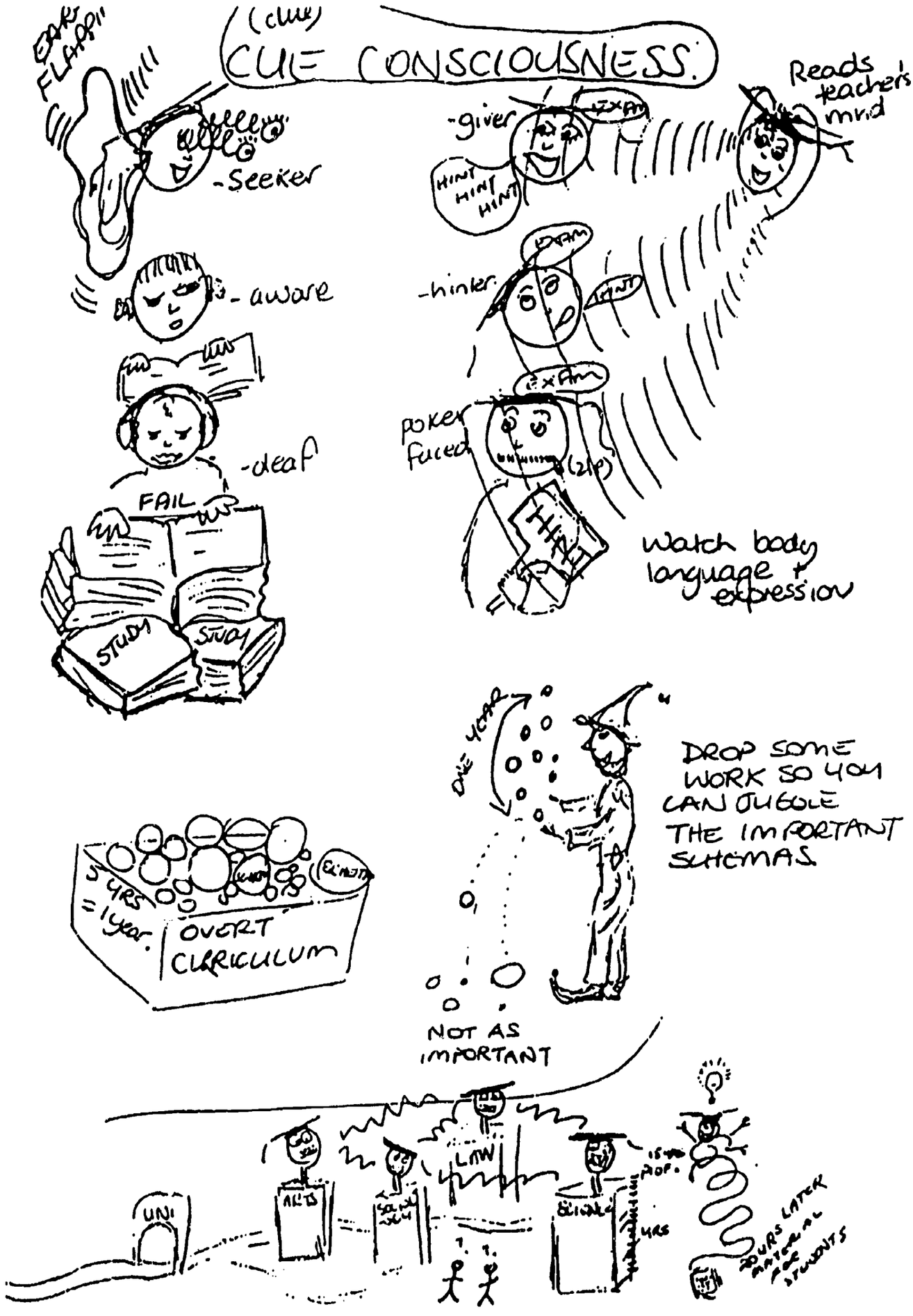
List strategies you have used to work to the hidden curriculum in a course.

Which subject or discipline do you identify with most? Can you identify the main competing theories? (Try a list).

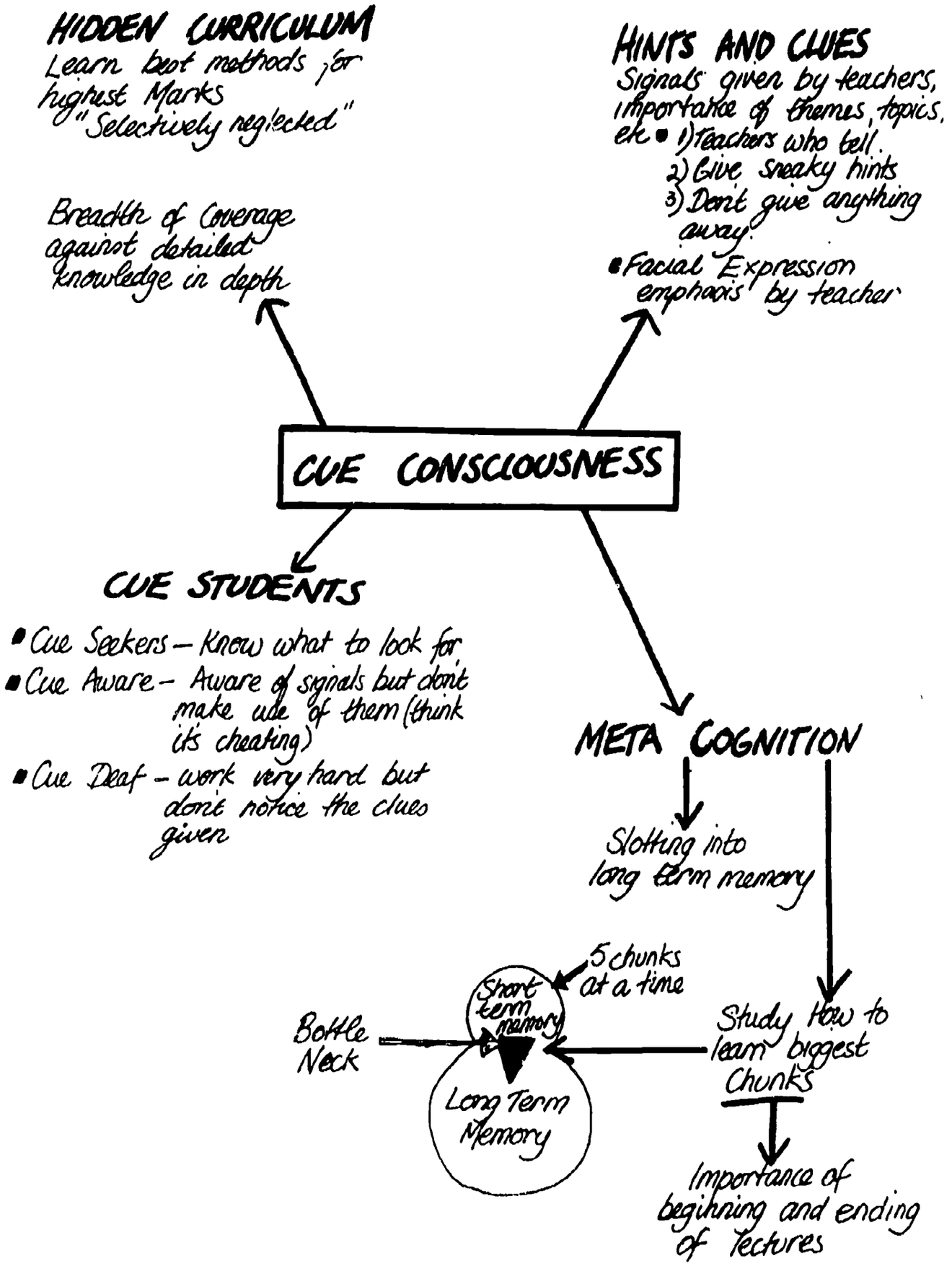
Which of the suggested three types of teacher are you? (Make point-notes of your main habits and practices regarding cues to students).

Has this unit caused you to rethink or re-examine your own history as a student? Note briefly any musings now, while they are fresh.

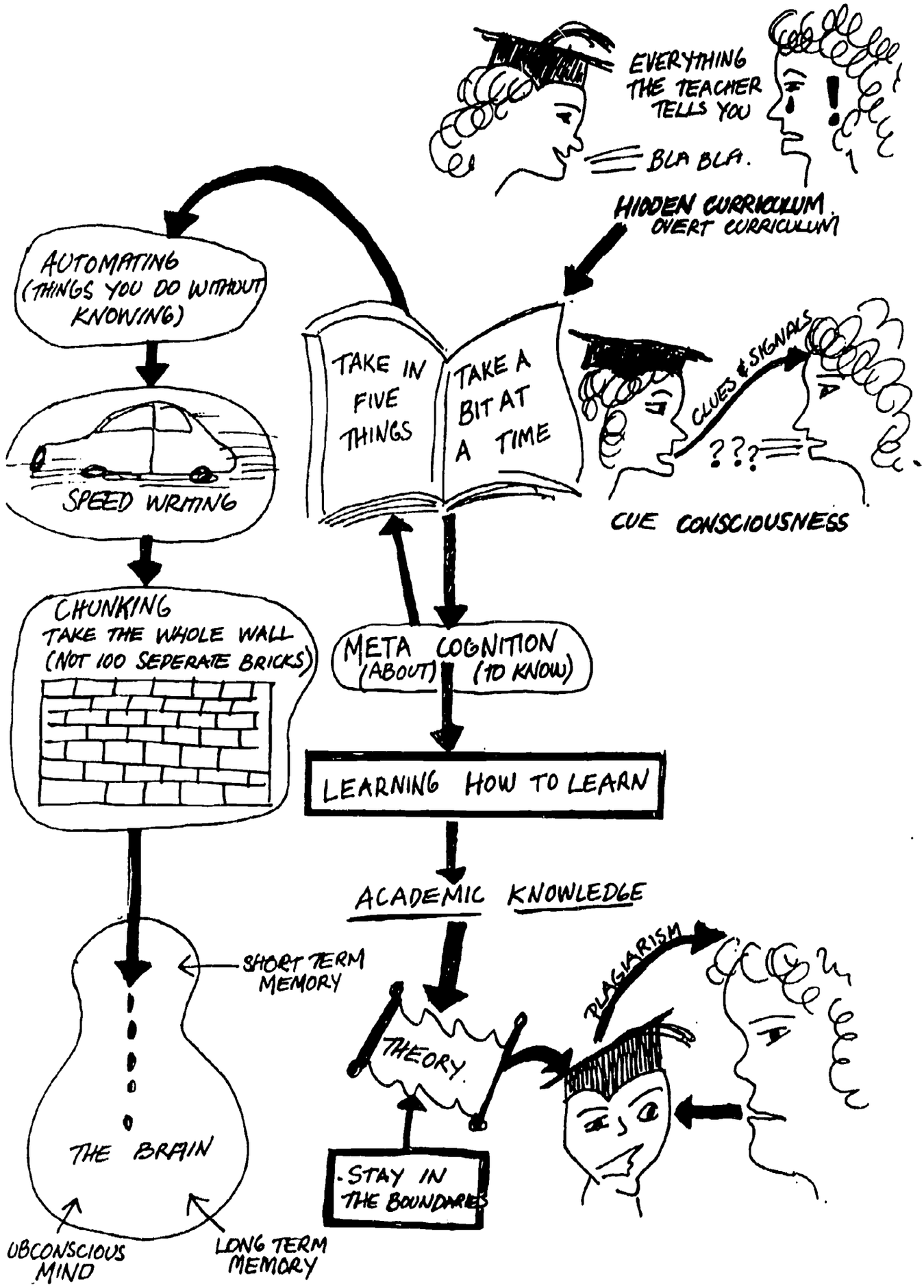
Sample mindmap 1



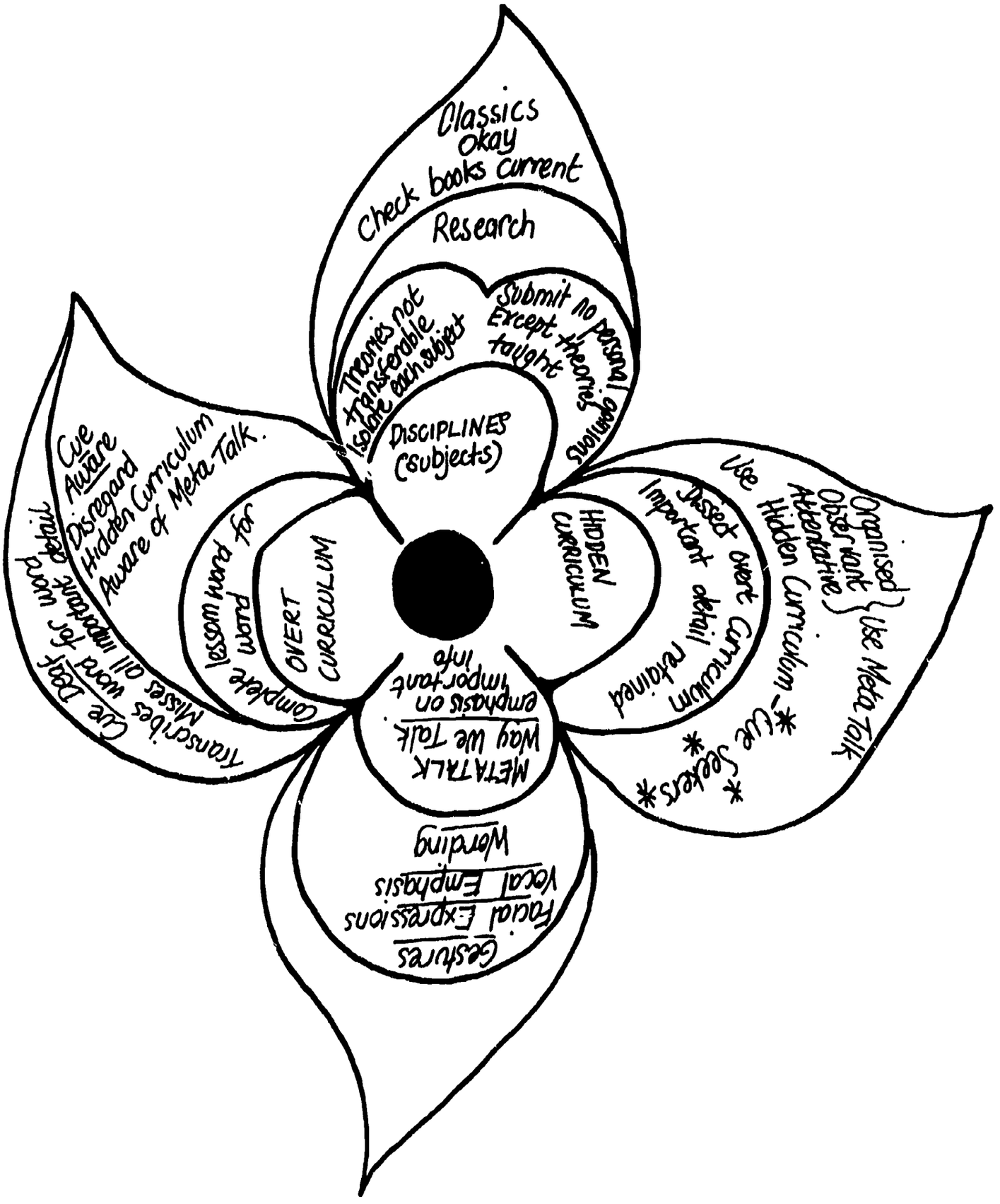
Sample mindmap 2

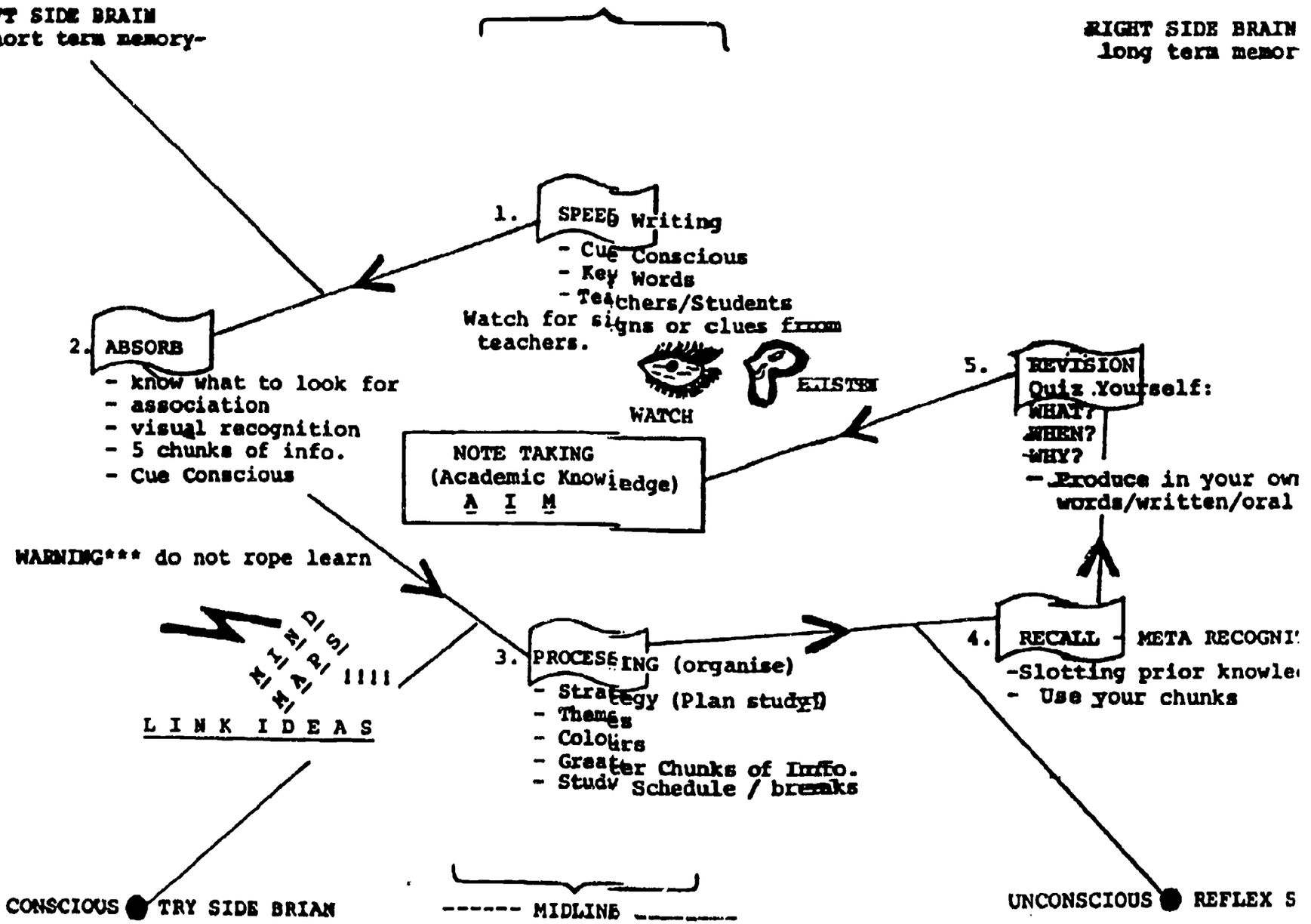


Sample mindmap 3



Sample mindmap 4




LEFT SIDE BRAIN
-short term memory-
RIGHT SIDE BRAIN
long term memor
1. SPEED Writing
- Cue Conscious
- Key Words
- Teachers/Students
Watch for signs or clues from teachers.
2. ABSORB
- know what to look for
- association
- visual recognition
- 5 chunks of info.
- Cue Conscious
WATCH
LISTEN
NOTE TAKING
(Academic Knowledge)
A I M
5. REVISION
Quiz Yourself:
WHAT?
WHEN?
WHY?
- Produce in your own words/written/oral
WARNING*** do not rope learn
LINK IDEAS
3. PROCESSING (organise)
- Strategy (Plan study)
- Themes
- Colours
- Greater Chunks of Info.
- Study Schedule / breaks
4. RECALL - META RECOGNI
-Slotting prior knowle
- Use your chunks
CONSCIOUS TRY SIDE BRIAN
------ MIDLINE
UNCONSCIOUS REFLEX S

EXAMPLE of DISCIPLINES (subject)

linguistics, has its own journal since becoming a discipline

9 new interdisciplin have arose from one subject each a new view, not necessarily knowledge.

HIDDEN points are subconsciously given as well as consciously

FACIAL EXPRESSIONS

DISCIPLINES

One Subject

To split up into different categories

INTERDISCIPLINES

EMPHASIS BY TEACHER.

NEW IDEAS FOR SUBJECT ARE CLASSIFIED INTO A NEW SUBJECT AFTER 10 YRS

MADE INTO DIFFERENT THEORIES AND USED AS TOOLS FOR DEBATES

COVERT

HIDDEN

Knowledge without (given one's own) conscious to 1 year. student has to decide what is important to know.)

CUE STUDENTS.

SEEKERS.

Knew what to look for.

AWARE

Thought they did but missed something.

DEAF

How with [illegible]

CUE TEACHERS. SEEKERS.

ONE WHO ADVICES.

AWARE

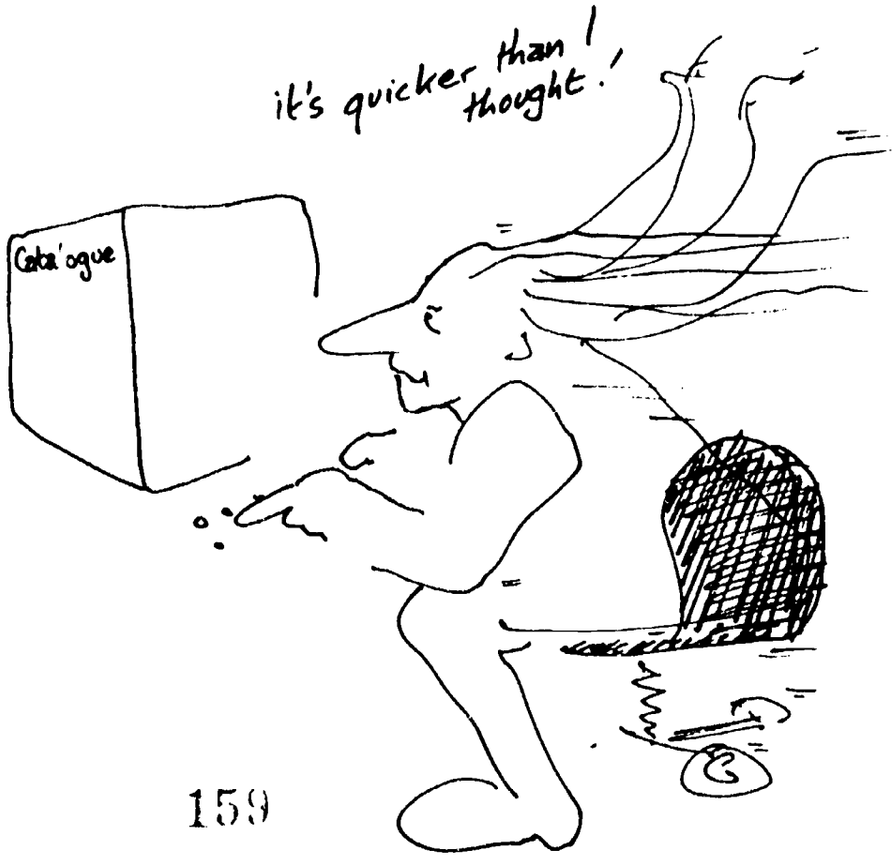
WHO DO NOT EMPHASIS CLEARLY WHAT IS REQUIRED.

DEAF.

WHO TEACH AND HAVE GIVE NOTHING AWAY WITHIN

Can student passed exams regardless of what kind of teacher they had, and pass more use to name percentage with AWARE student while to deaf students [illegible] teacher that taught them.

Libraries 4



session 4

Summary

Does double duty. It is devoted to becoming familiar with libraries but is positioned here to reinforce the idea that knowledge is structured, not only in disciplines, but also in libraries through the Dewey System.

	Read before class	*To take into class*	*Student handouts*
How libraries are organised	**Libraries** ..... 159 Description of what students need to know about libraries, and how to go about it	**Using a library** ..... 163 The suggested approach to the three parts of this 3-hour session, which includes activities in the library	***Dividing up knowledge*** ..... 167 Guide to the Dewey classification
In the library		**Using a library** ..... 163 Continues with a guide to the activities	***Library group exercise*** ..... 168 This is the practical task to be completed in the library
Group reports		**Group reports** ..... 169 A more detailed activity guide for this important part of the session	
		Reflections on Session 4	

session 4

Lesson plan

Homework review & revision

How libraries are organised

30 mins

name tags for everyone? (wear yours)
hearing impaired students seated near front

Dividing up knowledge

In the library

60 mins

Group exercise
Individual tasks

- hands-on computer
- checking out a book

Library group exercise

Break

Group reports

30 mins

small groups report back to whole group

Homework

- **Speed copying**
- **Listen to radio**
- **Mindmaps**

Your notes for Session 4

Libraries

Demystifying the aura of libraries

Silence

For many people libraries are quite intimidating. Although the reasons for demanding quiet or silence in a library may be simply practical — so that others can concentrate on their reading — silence itself possesses a distinctive and powerful meaning in our culture. To insist on silence means that there is something happening of special significance: a religious ceremony; a court case; someone seriously ill; someone needing to concentrate in a superhuman way such as driving in very heavy traffic. Observing silence is the most fundamental way we express respect for something greater than ourselves. Silence usually means that you are an intruder on a spectacle that is of special significance and that you should try to remain inconspicuous. This means that we can't help reacting to a library as if it were some sacred space: like a church or museum.

Respect for books

Not only do libraries have an aura of silence or quiet, but library books themselves have a special significance. A library book is a book that is not yours; it is someone else's property. It must not be damaged in any way; it must not be lost; it must be returned on time. As children, the precious status of library books is deeply impressed on us. Who hasn't coveted a library book at some time during their childhood?

Academic libraries

School libraries and local municipal libraries are often not good introductions to academic libraries. The pattern of selection and layout of books in a local library usually means that there is a large fiction section — often arranged into genres such as: children's; spy; detective; adventure; romance; western; Australian; large print. The non-fiction section contains a large section on practical arts and crafts; a section on the occult; and a smattering of other nonfiction material. In fact, many of our students call the non-fiction texts used in academic courses "novels".

The library tour

Most teachers realise the importance of library skills, and usually spend some time early in a course explaining how to use a library, or taking students on the compulsory library tour — either showing students around themselves, or turning them over to a librarian. However, we think of the library tour as particularly important, and over the years have tried to refine this exercise to suit the requirements of our range of students.

While there are many possible ways of exposing students to the library, we will give an account of what we do — which you may follow or adapt to suit your needs and style.

Link to academic disciplines

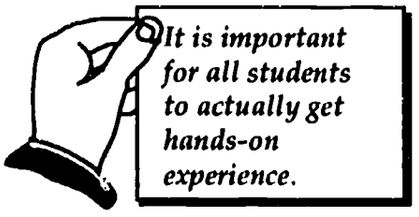
To begin with, we place our library tour after Session 3, "What is Academic Knowledge", so that it can reinforce the central importance of disciplines. Disciplines don't just structure how knowledge is taught, they also organise where books are shelved in libraries. That is, the books and other media

storing knowledge are organised according to disciplines: hence the Dewey system.

Explain the Dewey System

Most adults returning to study are not regular library users, and need to be exposed both to how books are shelved, and to a number of things that regular users take for granted. Every year students tell us that they had no idea what "the numbers on the books" were for or how they worked. What they say is that when they do use libraries, they just go to the section they are interested in and browse the shelves to see what they can find. Of course, this is a good thing to do — browsing; but if you are studying, have limited time, and need particular books, knowing how the Dewey system works is crucial.

Use the computer catalogue



It is important for all students to actually get hands-on experience.

Many have never used a computer to locate books and feel very nervous about having a go. It is important for all students to actually get *hands-on* experience, rather than just be shown around and expected to go back in their spare time and do it by themselves. It is better to try out these new skills in a supportive atmosphere alongside others who are also learning.

Limit the scope

In learning something new, you need to have a go but you also need to slice off a bit at a time. There is no point in putting students in overload. That is why we suggest that the first visit to the library is not a comprehensive tour, but rather an organised introduction to a few essentials, including how to look up where a book is on the shelves, and practice in finding it. Don't insist on showing students everything in the library. You can show them the micro-fiche, the on-line computer searches, the indexes; and the Reference collection at a later time when they are already comfortable with basic library operations.

Hands-on

However, an in-class explanation or short *library tour* is often not enough to give students the confidence to use a library. As a rule, library tours consist of walking around a library with someone pointing out where things are located and describing and explaining how the library system is organised. But what is needed is a practical, hands-on introduction. For regular library users, the technology associated with modern libraries may seem rudimentary. But for new users the computers, microfiche readers and even photocopy machines are new and intimidating.

Computers

For many women who have been housebound, this is their first encounter with a computer, and they will often hide quietly on the edges of a group hoping to be overlooked and thus not be forced to reveal what they experience as ignorance and stupidity. Similarly, they are often worried that they can damage the computer by doing the wrong thing -- say, by typing in the wrong command or misspelling a name. These women, especially, are surprised to realise how straightforward a computer is.

The more mistakes they make the better.

To overcome this computer-phobia we insist that every single student use the computer sufficiently to feel at home on it. What we do is get someone to have a go on the computer and then when they feel confident using it and have succeeded in locating some call numbers, they explain how it's done to the next person, who then explains to the next — and so on. We also encourage them to see what the computer does with typing errors. The more mistakes they make the better as this means they can explore the margin of error within the computer software system. So we encourage them to type in incomplete or misspelt authors and titles to see what will happen. From this they learn two things: that the computer cannot be damaged by typing in mistakes; and that the computer has a very limited intelligence.

Checking out a book

We also insist that all students physically check out a library book — even if they then return it immediately to the returns chute. We do this because we have found that many students — although they have "done a library session" — still do not know how to actually check out a book. For example, I recall one student who, when I said we would being going to the library, insisted, "I've been on that tour with another class". She was implying that, for her, the session was not necessary. Later in the library, when it was time to borrow books, the same women pointed to the information desk and the loans desk and asked: "Do I borrow from there or over there?" So, even though some may have been on library tours or may even visit a library regularly, don't assume they are efficient users of libraries.

However, the exercises also have another focus. They are organised so that, while doing the "search and find" type activities, students are also exploring different disciplines. They are encouraged to take out a book so they can give the rest of the class an idea of a particular section of the library — e.g. sociology — and what that discipline seems to be about. That is, what is the discipline of "social psychology" about? What's anthropology? etc. Many of these disciplines will be new to students. They may have heard the word "anthropology" but don't know what it's about. Students are asked to report back their findings based on skimming the Table of Contents or reading the blurb on the back of the book.

When I was a student many years ago at Monash University, I didn't bother to try to find out exactly how a university library worked. I had haunted local and school libraries all my youth so I thought I knew everything there was to know.

However, in my third and fourth years I kept looking up the catalogue and getting the Dewey number for books I needed in my Philosophy classes but they were never there. This went on and on for a couple of years. Eventually I discovered, I can't remember exactly how, that there was an entire floor set aside specifically for honours and post-graduate students. There were actually two separate collections: one for run of the mill undergraduate courses and another for Honours and Post-graduates.

And you guessed it! All the books I had been looking for were in this other collection.

I tend to find my way around by using my nose. I don't remember the names of most of the streets I travel on even though I know exactly where they go and have a location of library books, not by their Dewey number but by where they are located in the library. So, I tend to remember where a book is by: 'it's on the first shelf up the stairs right at the end of the second to top row'.

For years, this way of remembering where books were has stood me in quite good stead. However, lately it has broken down. Each year now for the last 4 or 5 years, the libraries I use have rearranged their book collection. So, not knowing Dewey numbers, nor keeping proper records of Dewey numbers has meant that at the beginning of each year I suddenly can't find any of the books or even sections I use.

Eventually I admitted defeat and learnt the Dewey numbers for the main sections I visit. I also now scribble book titles, author, and the Dewey number of books I think I might want again on a piece of paper, usually a supermarket docket. I throw all these bits of paper in a tin, which I can search through if I need to.

OK. I admit it. I'm what they call a "slow learner" — but I'm getting there.

Activity guide

Using a library

60 minutes

Preparation

Decide which library

Before this session, decide which library to use as you will need to visit it prior to the session and make a student handout for each small group in your class. This exercise was designed for our context which is a TAFE college, and we could assume that anyone enrolled in the course could borrow using their student card. If you intend to use a local library, students can become members even though they do not reside in that community. Also you could check out the situation with your local TAFE or tertiary institution as some do allow community members to join.

Prepare handout information

In the library, browse the shelves and record the call numbers for the student handout (see sample). Locate enough examples in each discipline so you can organise the students into small groups and each group is able to practise locating at least 6 to 10 books. Have each group represent a discipline, for example, one group's list will be books in philosophy, one in psychology, another group can explore sociology, and so on.

By selecting the books beforehand, you can make sure there is a range represented in each discipline: a textbook, a popularisation of the topic, a journal, and so on. Also include some unusual or shocking books as well — it adds to the interest of the exercise. Selecting the books beforehand means that most should actually be on the shelves when the students arrive which means they will experience a more successful search. We all know how disappointing it is to try to find books which are not there!

Notify the library

Be sure to inform the library your class is coming and that they will be working in small groups. There are two reasons for this:

- the timing may not suit them: they may have three classes already booked for the time you had in mind, or some other special function happening
- students will be working in groups which means that there will be more noise than usual.

We have found librarians very helpful when consulted and informed of our plans. Once I did forget to do this first. Just about all of the above was happening. There were three other classes trying to use the computer, and the library was short-staffed. Someone also complained that the groups were too noisy. When they realised that they were adults doing an assignment, not young kids gossiping, they were very co-operative. However, none of this would have happened if I had given proper warning beforehand.

Explaining the Dewey system

Organisation of knowledge

We have found it important to carefully explain the Dewey system and how it organises the shelving of books within a library. For us this explanation of the structure of the Dewey system follows on from the idea that knowledge is not a single coherent unity, nor an amorphous collection of blobs. Just as modern knowledge is organised into disciplines, so too libraries organise books into sections that are discipline based.

Main points

- Melville Dewey came up with this system over a hundred years ago.
- Each book has a number so they could be located easily.
- There are ten main areas.
- These numbers are located on the back of the book. (Have a few library books handy to show this to students.)
- Point out that the numbers are not just on the books themselves, but are listed on the shelf guides to help you narrow down the right section of the library.

So, for example, we point out that books on women are not all collected in the one place but that they are scattered through the library in terms of their discipline. See the handout *Dividing up knowledge.*

The decimal system

It pays not to assume that students understand the intricacies of the decimal system. When the numbers get more complicated there can be problems learning to "get the hang" of the system.

Locating the first three numbers is straightforward:

> **160** is before **170** which is before **350**, etc.
>
> However:
>
> is **161.3679** before or after **161.1754**?

Because the Dewey system was invented last century and knowledge has changed since then, many subjects did not even exist (e.g. computers), so we can be faced with some very long numbers. We usually do a few examples on the board:

> **330 330.4 330.46 330.4658 330.5**

Remember:

- Explain how the numbers can continue onto a second or third line.
- Work out a few examples on the board — does 301.34567 come before or after 301. 4, and so on.
- Point out that more than one book can have the same number. You have to distinguish them by the three letters.
- Point out how the initial 3 letters of the author's surname are used unless it is an edited work.
- Point out that all the books with the same number are then ordered alphabetically.
- Point out that areas of knowledge that have developed in very recent times will have lots of tiny subdivisions and thus very long numbers.
- Point out that often libraries have an information desk staffed by someone whose job it is to help you find what you need.
- Point out that different libraries will have different emphases in their collections. A TAFE college may have only a dozen philosophy books while a university may have thousands. A local library may have a large cookery collection while a university may have no cookery books at all.

Purpose

The purpose of this segment is for the activity groups, each of which has focused on a small section of the library, to tell other groups what they came across. It is their chance to say what they found interesting or unusual in their particular section and to encourage others to browse that section for themselves. It is also, for some, their first exposure to the different disciplines and the way they are stored in the library.

Selecting the examples

If you have designed the group handouts carefully, and chosen a good range of books, this can be a very interesting exercise. Try to include a mixture of textbooks, popularisations of a topic, and books which people should know about. (A few which come to mind are *The Legal Resources Handbook*; *Pink Pages: A Directory of Women's Rights in Australia*; and *Our Bodies, Our Selves: A Book by and For Women*.) Some people are quite surprised to find out such books exist. It is also the first time in this course that a group has to work together and present something to the rest of the class.

Format

We tend to take a very low-key attitude to this segment. Remember that this will be the first time anyone has been asked to speak formally to the whole class. We jokingly refer to it as "show and tell" to connect it up with formats they will be familiar with.

Allow 15 minutes or so for each group to choose a speaker and to work out what they want to say about the books they have brought back from the library. Circulate around the groups to make sure they know what they are doing.

If you have chosen a suitable range of books they should not have too much difficulty, but they will still be exceptionally nervous. Encourage the group representative to hand over to other members of the group for reports on specific books. You might keep a list or tally on the board under the headings 100–200, 200–260 etc., so the class has a visual representation of the Dewey system as each group presents their report.

Even the most apparently obvious aspects of speaking in class will be new to many students. Students will be unsure whether to stand up to speak, as they often did in their primary schooling. They will also speak too softly, or not face the rest of the class while speaking. We insist that it is better simply to stay seated, but ask them to speak loudly. We do not ask them to stand or to come to the front of the room.

Steps

1 **Before library activity, explain Dewey System**

Handout *Library group exercise*

Point out the 10 main areas

Point out the relationship to academic disciplines

Give examples of Dewey numbers

Explain why some numbers are so long

2 **In the library**

1 Exercise: find out what one discipline is about

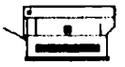
2 Hands-on computer for each student

3 All check out a book

3 **Group reports**

Individual reports to group

Dividing up knowledge



Sections in a library

Last week we looked at how Knowledge in our society is divided up, or compartmentalised into subjects or disciplines. Next week we will be discussing how to read a book. So this week is a good time to have a look around the library.

Books in the library are not organised by weight, shape, or colour — they too, are compartmentalised. You might think that this organisation of books would be based on what the book is about, but this is not the case.

Disciplines

The books in the library are **organised into disciplines** in the same way as tertiary institutions. So, for example, books about women will not be all together on the shelves:

- some will be in the **psychology** of women section
- some will be in the **sociology** of women section
- some will be in the **politics** of women section
- some will be in the **legal** status of women section
- some will be in the **health** of women section
- some will be in the women's **literature** section
- some will be in the **history** of women section

In this list we left out *economics* of women, *anthropology* of women, women and *technology*, women and *art*, women and *education*, and many others.

So, today we will be investigating how these divisions are organised.

The 10 main divisions

000 Generalities

100 Philosophy and related disciplines

200 Religion

300 Social sciences

400 Language

500 Pure sciences

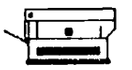
600 Technology

700 The arts

800 Literature

900 Geography and history

Library group exercise (sample)



Step 1 Find out what discipline is located in the section 300 to 330.

Begin by browsing the shelves. Generally, what are these books about?
Jot your answer here:

_____

Step 2 Next, see if you can find these books:

306.3
EWD

306.3
ILL

306.4
JEN

306.7
SEX

In this library, journals are kept on the shelves mixed in with the books.

Step 3 Find the following journals:

362.830
25
VIC

326.705
CHI

362.8
YAT

Step 4 Skim the table of contents and list a few titles.

What sort of things are being researched or studied by people in this discipline? What are they writing articles about?

Step 5 Each member of your group should take out a book from this section.

As a group, select books that represent a range of what you found. Also, choose a few that are interesting, intriguing, or unusual. In other words, books that might make someone think "that's interesting, I'll have a browse there myself next time I go". You can use the books listed above if you want.

Each group will give a brief summary to the rest of the class about what they found. So, if you finish early, you can start organizing this or keep browsing.

Step 6: Finally, make sure you each have a turn on the computer.

Activity guide

Group reports

Purpose

The purpose of this segment is for the activity groups, each of which has focused on a small section of the library, to tell other groups what they came across. It is their chance to say what they found interesting or unusual in their particular section and to encourage others to browse that section for themselves. It is also, for some, their first exposure to the different disciplines and the way they are stored in the library.

Selecting the examples

If you have designed the group handouts carefully, and chosen a good range of books, this can be a very interesting exercise. Try to include a mixture of textbooks, popularisations of a topic, and books which people should know about. (A few which come to mind are *The Legal Resources Handbook*; *Pink Pages: A Directory of Women's Rights in Australia*; and *Our Bodies, Our Selves: A Book by and For Women*.) Some people are quite surprised to find out such books exist. It is also the first time in this course that a group has to work together and present something to the rest of the class.

Format

We tend to take a very low-key attitude to this segment. Remember that this will be the first time anyone has been asked to speak formally to the whole class. We jokingly refer to it as "show and tell" to connect it up with formats they will be familiar with.

Allow 15 minutes or so for each group to choose a speaker and to work out what they want to say about the books they have brought back from the library. Circulate around the groups to make sure they know what they are doing.

If you have chosen a suitable range of books they should not have too much difficulty, but they will still be exceptionally nervous. Encourage the group representative to hand over to other members of the group for reports on specific books. You might keep a list or tally on the board under the headings 100–200, 200–260 etc., so the class has a visual representation of the Dewey system as each group presents their report.

Even the most apparently obvious aspects of speaking in class will be new to many students. Students will be unsure whether to stand up to speak, as they often did in their primary schooling. They will also speak too softly, or not face the rest of the class while speaking. We insist that it is better simply to stay seated, but ask them to speak loudly. We do not ask them to stand or to come to the front of the room.

Reflections on Session 4

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student.*

Pick a subject area which interests you but you don't know much about.
Go to the library shelf and see if you can work out the sub-discipline structure by working backwards from the call numbers.

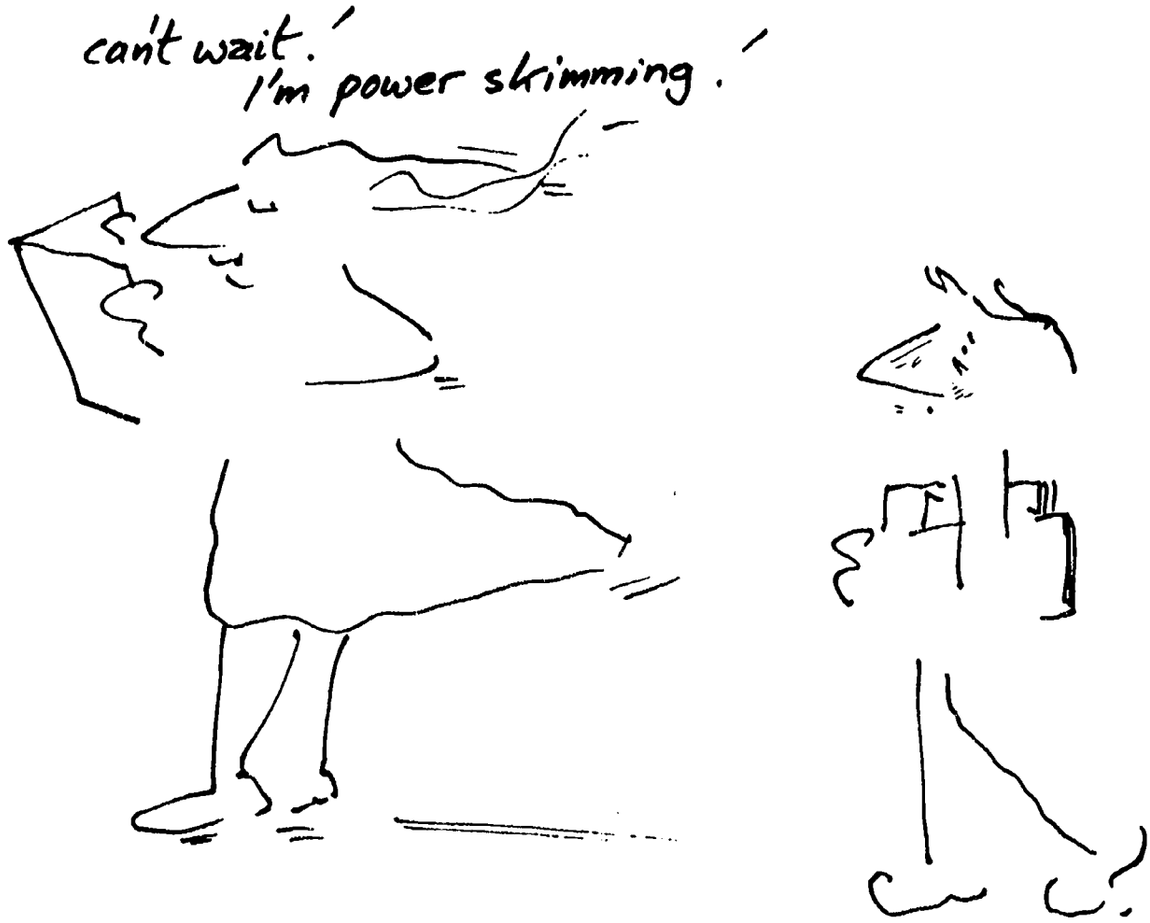
When and how did you learn to use a computer catalogue? Note down any recollections you have (errors, misunderstandings, fears, successes).

Note the things you personally like and dislike about going to the library.

How do *you* use libraries?

for "take-aways" — to find materials for loan only ☐
to browse ☐
to write and study ☐
to take notes ☐
to use reference services and materials ☐


Reading 5


can't wait.'
I'm power skimming.'

session 5

Summary

This session continues the idea of "structure" from the previous two sessions, but considers its application to reading and the structure of a book.

	Read before class	*To take into class*	*Student handouts*
Introduction to reading	**Reading** ..... 175 An explanation of our approach to teaching and learning reading	**Activity guide** ..... 181 Suggested steps for presenting this material through activities **OHT 1** ..... 186 **OHT 2** ..... 187 **OHT 3** 188	***Do I have to read every word?*** ..... 185 Handout to illustrate skimming
How to read a book		**Activity guide** ..... 189 A systematic approach to introducing all the parts of a book **OHT 4** 194	***Getting an overview of a book*** ..... 193 Support material for the activities

Reflections on Session 5

session 5

Lesson plan

Review metacognition, cues and schemas

Introduction to reading

60 mins

Schemas
Reading as comprehension of meaning

Chunking
Meaningful groups

Skimming
Meanings are brought to the materail

Do I have to read every word?

Break

How to read a book

60 mins

What is intelligence?
Metacognition
Short term memory bottlenecks
chunk big; automate; a bit at a time

Getting an overview of a book

Your notes for Session 5

Reading

As this is the final session presented in this guide, it is important to point out that students in our continuing course would start reading a set text at the end of this session.

If you have a class text, you could introduce it during this session. Hopefully, students will be able to take many of the different ideas, hints and approaches to study covered in this guide and apply them to the process of reading.

This session has two functions:

- to link the ideas already covered (such as chunking, schemas, and metacognition) to the process of reading a text
- to explain the parts or structure of a book.

Students should realise that the idea of "doing things intelligently" applies not just to memory in general, but to reading as well.

Why explain the reading process?

In a course students are usually expected to read articles or books of some sort. And we know one of our roles as teachers is to help students understand this reading. We do this by discussing the content, showing appropriate films, assigning relevant homework and so on.

These are all very important activities, but they assume that the students know what to do when they are actually engaged in the process of reading itself. Our view is that there are crucial strategic and tactical decisions that have to be made while actually reading. If these decisions are overlooked or made badly, the reading process is undermined.

There are basically three reasons for discussing the reading process at this point:

Develop better strategies

First, it helps people to feel less threatened by the task of reading to realise that the reason they find some reading hard is because they are using inappropriate strategies.

For example, students often think that being a good reader means reading very slowly and very carefully — to skip over any words is thought of as cheating. But slow reading can overload short-term memory to the point that what is being read cannot be processed quickly enough to get the overall meaning — we can't see the forest for the trees.

Overloading short-term memory while reading is what causes the common experience of "I read all that, but I don't remember a word". Another example is that students often think good students start at the beginning and read methodically word by word to the end, rather than skim beginnings and ends to see what it is they are reading for, what point the text is trying to make, what the arguments are, or what the conclusion is.

Provide a positive approach

Second, students find it reassuring and positive to think,

> *The reason I find this material difficult is because I don't have a well-developed schema (prior knowledge) for this topic*

rather than thinking something like,

> *I knew it. I really am stupid, there's no way I'll ever get on to this. I might as well quit now!*

This is the difference between being able to do something to come to terms with difficult material, and just giving up.

For those who have some fluency in reading, it's not really the *reading* per se which is hard — or rather, the problem is not the *words*. What is difficult is coming to terms with new ideas and concepts, and the language used to represent these concepts. Most of us can remember coming across articles or books that were simply beyond us, even though we consider ourselves to be good readers. In the context of a course, as we hear lectures, attend tutorials, and talk to other students, the ideas and language begins to fall into place. But if reading wasn't a challenge, what would be the point? Why study if we aren't learning anything new? This paradox is what is both frustrating and at the same time rewarding about grappling with new ideas and the vocabulary used to express them.

To assist parents

A final reason for explaining the reading process is that most of our students are parents and so they have a strong interest in helping their children with reading. Most parents, but particularly those who are themselves returning to study, are passionate about education and want their children to be competent readers and successful at school. Any ideas about education are important and help them relate to their children and to teachers. Many will want to ask questions about reading and talk about their child's particular reading progress or difficulties.

There are several good books to suggest — *Reading begins at home* by Marie Clay and Dorothy Butler is worth mentioning.

The two different models of reading we use to explain the reading process are based on:

- ***psycholinguistics***
- ***the analysis of text structures.***

Model 1

The psycholinguistic approach

We begin with a psycholinguistic model of reading because this approach draws on the same concepts from cognitive psychology we have been using in earlier sessions to re-frame students' approach to their studies. So, to use the same concepts to re-frame their approach to reading makes good sense. The psycholinguistic theories relate directly to the ideas of short-term memory, schemas, cues, and structure — ideas students should now be familiar and comfortable with (see Smith and Goodman in *Further Reading*).

Psycholinguistic view of reading

There are many theories of reading but for us the important consideration is:

> *Which theory helps give adults the confidence to approach unknown and often difficult material without losing their nerve, wanting to give up, or feeling helpless?*

During the 1970s psycholinguistic theories of reading focused on the question, "What do fluent readers do?" By discovering what skilled readers do, and comparing that with what poor readers do, it was felt that teachers would be better able to assist poorer readers by applying the strategies used by more fluent readers.

The main focus of attention was on the fact that reading is not simply a matter of decoding the words on the page; *what the reader brings to the reading* is crucial to making meaning out of the words on the page. Reading is not so much a matter of *decoding* a message as *making sense* of the message. Being able to make sense of it is what helps you to decode it.

Good readers and good students

According to this theory, reading is not an exact, "word perfect" process but rather a psychological guessing-game based on the reader's use of language cues. For example, good readers don't panic every time they come across words they don't know. They will predict, guess, skip over, etc. because they know that the meaning may come to light further along in the sentence, or later in the paragraph or section. That is, instead of getting bogged down by stopping to look up every word and exhausting short-term memory, they just keep reading.

This connects back to our discussion of so-called "good students", the ones who are cue deaf and simply plod through their study without trying to separate out the important from the unimportant. In terms of reading, you should not be one of these "good students" who reads slowly and painstakingly, constantly looking up words. Rather, we want students to read quickly, *trying to get the gist of the text.*

Why is this important?

Students have told us over and over that when they decided to come back to school this time, they were determined to succeed. They were prepared to work hard and slog away at it. But they think that reading is about getting it right the first time. They say their approach is to read very, very, carefully (which means slowly) and to look up every word along the way. The problem is that reading slowly and carefully can easily overload your short-term memory, so you begin to drift.

Permission to cheat

This is further complicated by taking your attention away from the text to stop and look things up. Inevitably the process of reading becomes a disjointed sequence of stops and starts. Eventually, you decide to stop and try again later. When you return to the book, you start again from the beginning — just to get it straight this time. Again, you find yourself in the same predicament and decide to try again later. Once again, you start over, from the beginning, and if you don't get it this time — you just give up. A better strategy would be to read quickly (skim) not getting bogged down.

One of the important things about the psycholinguistic approach to reading is that it gives students permission to "cheat": to skip over bits that don't immediately make sense, to skim, to dip into the text at different points. And this helps them to keep a focus on the overall meaning, rather than get bogged down on specific details.

The value of skim-reading

To explain why skimming is a good way to begin reading a new text, we draw on the idea of short-term memory overload. To focus too much on the details will overload our short-term memory system and mean that we can't retain a sense of the overall meaning. We will be side-tracked into specific details that are not crucial to grasping the overall sense of what we are reading.

Students report that when they read quickly, they do, in fact, pick up more than they thought they would. This quick skimming is important as a way to build up an initial schema to support a more careful reading later.

The first reading

Obviously, not everything can be read quickly all the time, because there are times when a slow careful reading is required. We make a distinction between an initial reading of a book and studying it. Students should be encouraged to see the first reading as a quick skim, not slowing down to check things out. This is because it is only once you have skimmed a piece that you are aware of where the difficulties and problems are.

For example, a concept you come across may be explained in the next sentence, or illustrated with examples as the paragraph goes on. It may not even come to light until you've read the conclusion of the section or chapter. How would you have found this out if you had just kept stopping and starting again at the beginning, or had given up?

On a first reading, we should read quickly, getting an overview. As active, metacognitive readers we put question marks in the margin reminding us to come back to that spot later to look something up, or to raise it with the teacher in the class.

Reading and metacognition

This is where *metacognition* comes in. If metacognition means "knowing what you don't know", then in terms of reading you need to be an active reader. Again, an active reader asks questions such as:

How does this fit into what I already understand?
What do I need to know more about?
Should I go to a simpler text for more background or see the teacher for a better explanation?

You need to judge whether you have enough of a schema to understand what you are reading or whether you should read around the topic, ask someone to explain it, discuss it with other students, or view a film to help fill in some of the gaps. And, of course, this is why we have teachers who can explain and scaffold new concepts.

Reading and schemas

Many psychologists view the reading process as information processing. As you read, short-term memory is being called on to see the words, and long-term memory is working to link up this new material by clustering, chunking and organising the material in some way. This ability to take in what you read depends on your ability to integrate the new information with the old. In fact, some people would say that that is precisely what all

learning is: *being able to connect new information to our existing schemas to develop a new schema.*

This idea is important for adults returning to study because it provides a coping strategy for the problem of not understanding everything they read. Many students have commented over the years how this notion of *schema* helps them to avoid feeling totally discouraged when they can't understand a text. It means that rather than despair when you came across new and difficult material, you can rationalise it with the idea that you just need more time to read around the topic, to ask questions of the teacher, or to discuss it with other students. In time, as your schema on the topic expands and develops, so will your comprehension of the topic.

Model 2 The text structures approach

Meaning and whole texts

Although the psycholinguistic approach, with its emphasis on reading for meaning, was a healthy corrective in the 1970s to the earlier behaviouristic forms of reading instruction (especially in primary schools), there is more to be said about reading ten years later. In those days the problem was that reading was taught in a bottom-up way. That is, students were first taught letters, then words, then sentences, then whole texts. They were often not allowed to begin with whole texts and simply get a feel for how stories or books worked by reading and being read to.

Looking at text structures

However, these days the problem is different. Most teachers have picked up the idea of reading for meaning. But this has often gone hand in hand with a total neglect of *looking at how texts actually work and what text structures are used.*

Meaning has been transformed into something amorphous and spiritual which exists only in the reader's head, which is mostly a product of the reader's prior knowledge and which in fact has very little to do with the wordings on the page. In fact, sometimes you can't help wondering from the descriptions given of the reading process by educationalists why readers don't simply read with their eyes closed. If reading is really just a process of running through ideas you already have in your head — is simply a sampling process where you need to check whether the author is saying the things you expect them to say — it would seem that we could spend most of our reading time with our eyes closed. But, like it or not, the text and the way it says things does matter. We cannot read without a book and the actual marks on the page, and the way these are ordered is not a minor part of the reading process.

So, having first introduced students to the idea of going for the overall meaning and doing this by skimming, we later (following the sessions presented in this guide) begin to focus on how the actual text is working. We use this "text structures" approach to look at concrete reading strategies for getting onto new material.

Unfortunately, we cannot explain the text structures approach in this guide because it needs to be illustrated by a specific text. However, to give a

general outline of the sort of things we do point out, we will mention just one text structure we deal with — summarising.

Reading and cue consciousness: *summarising*

Realising that *some parts of a text summarise other parts* is crucial to being able to skim effectively and get a fairly accurate sense of what the text is about. Not every sentence has the same value. Some sentences are more important than others. If skimming is not to be just a hit and miss matter, it can be done in a systematic way.

preview & review

- We first demonstrate that some text segments (nominal groups, clauses, sentences or paragraphs) preview or review other longer segments. In any longish text not every bit is just saying something: some bits say what is going to be said, and other bits say what has been said. In other words, they summarise longer segments. A very standard structure is:

  saying what I am going to say,
  saying it,
  saying what I have just said.

  This means that there is a hierarchy of levels within an expository text. The details can be left behind while the governing ideas are kept alive as the book progresses.

location

- We point out that these higher-level summarising segments can usually be located graphically — they are at the beginnings and ends of chunks. These chunks can be the whole book, chapters, sections, paragraphs — even sentences. For example:

  an introduction will summarise the entire book,
  the first paragraph of a chapter will summarize the chapter,
  the topic sentence will summarise a paragraph,
  the concluding paragraph of a chapter will summarise that chapter, and so on.

signals

- We point out that these higher-level statements are also signalled or signposted by meta-discourse. There are conventional ways used by writers to signal when they are either previewing or reviewing.

attending to cues

- Both the graphic cues and the wording cues have exactly the same function in writing as the cues used by teachers. In fact, the wording is often similar. So the students can use the idea of *being cue-conscious* in their reading as well as in their listening. Rather than simply attending to what is being written, they can attend to the cues that signal why it is being said or what importance is being given to it.

However, this more detailed examination of how academic texts work and the structures they use takes far more time than can be fitted into this short Returning to Study course. It should be something one comes back to periodically while students are actually reading a text, and it should always be done in context. That is, it should be presented as a strategy or tool that students can call on to help them understand and grapple with the meaning of the book or article. It should never become an isolated study skill treated in its own right.

Activity guide

Introduction to reading

45 mins

Activity 1

How are schemas related to reading?

Note:
these activities are based on the work of Frank Smith.

Place the following sentence on an Overhead Projector (or select your own difficult text) to show that schemas (prior knowledge) are important to reading. It is not that we can't "read" the words, but that comprehending is more than being able to say the words — what psycholinguistics calls "barking at print":

> Hegel's objections to Kant's handling of the "true a priori" is that the latter's reduction of this a priori to the pure formal unity of the I think not only robs the true a priori of its character as an original, synthetic unity, but also fixes the formal Ego in an opposition with an always unfathomable beyond.
>
> — R.Gasché, *The Tain of the Mirror: Derrida and the Philosophy of Reflection*, Cambridge MA, Harvard University Press, 1986, p.51

This sentence is from a philosophy text. Most of us are not trained as philosophers. We may have no idea who Hegel or Kant is, or what they are arguing about, or what "a priori" means, so how could we possibly know what a "true a priori" refers to?

Fortunately, in a course, even though at first a lot of the reading may feel like the example above, we get opportunities to develop our schemas by attending lectures, doing background reading, asking others who know more about the topic, and so on.

Using metacognition, we can ask,

What do I need to do to understand this better?

Activity 2

Is chunking important when I read?

Ask students to have a pen and paper ready. Give them a short glance (1 second) at each of the following lines on the **OHT 2**, and ask them to write down everything they can remember:

1 Show the string of letters by flashing just this line of the projector:

JLHYLPAJMRWKHMYOEZSXPESLM

They will get about 3–7 of these items written down, as that's all short-term memory can cope with.

2 Next, flash the series of five words:

SNEEZE FURY HORSES WHEN AGAIN

Now they should be able to record 3–5 words.

3 Finally, flash the sentence:

EARLY FROSTS HARM THE CROPS

They will remember the sentence easily because it forms a single chunk of meaning.

4 Discuss how much they were able to record for each OHT.

The point to this activity is that, even though each example has the same number of letters, the way the letters are "chunked" makes a difference to how much we take in.

- In the first example, each letter is an individual chunk.
- In the second example, the brain is able to rely on semantic cues because the letters are grouped into meaningful words.
- In the last example, the brain is able to make use of language cues of syntax and semantics because the words are organised into a single meaningful sentence.

There is less *short-term memory overload* as the information is packaged into more meaningful chunks. This means that when we read we should try to take in bigger chunks or phrases and not focus on individual words. If we notice that a paragraph or section is especially difficult, then the strategy of "a slice at a time" may be relevant. We need to go back and work over that section, and try to comprehend its meaning separately.

Activity 3 Do I have to read every single word?

Ask students to read the Handout, *Do I have to read every single word?*

This activity sums up the ideas above. We don't need to read every word on a page. In fact, even with words left out, or only part of a word, we can take in the meaning. This is because the meanings are not just on the page, but are also in our heads.

Do you need to read every word?

The answer to the _____, "Do I need to _____ every word?" can be demonstrated by the fact that you ____ read this sentence. Because your _____ is intelligently trying ___ make sense of this it fills in the gaps. Also, even if p __ t of a w __ d is mi __ i_ g you c __ still r ____ d it.

Summary of Steps

Review metacognition, cues and schemas before these activities.

1 Schemas

Show sample sentence **OHT 1**

Point out that reading includes comprehending, more than just being able to say the words.

To comprehend, you need prior knowledge, or schemas.

2 Chunking

Students need pen and paper ready.

Show each line on **OHT 2** for no more than 1 second each:

- string of letters
- group of five words
- sentence

Discuss the results:

Each example has the same number of letters.

The words are easier to remember because they are chunked into meaningful groups.

The sentence adds grouping by syntax as well as semantics.

3 Skimming

Distribute Handout, *Do I have to read every word?*

Tell students that they are not allowed to turn it upside down.

Explain that the meanings are not just on the page, but in our heads.

Do I have to read every word?

See if you can fill in the gaps in this paragraph:

The answer to the _____ , "Do I need to _____ every word?" can be demonstrated by the fact that you ____ read this sentence. Because your _____ is intelligently trying __ make sense of this, it fills in the gaps. Also, even if p ___ t of a w ___ d is mi ___ i _ g you c ___ still r ___ d it.

Can you read it?

Hegel's objections to Kant's handling of the "true a priori" is that the latter's reduction of this a priori to the pure formal unity of the I think not only robs the true a priori of its character as an original, synthetic unity, but also fixes the formal Ego in an opposition with an always unfathomable beyond.

From *The Tain of the Mirror: Derrida and the Philosophy of Reflection*, p.51

Chunking

OHT 2

JLHYLPAJMRWKHMYOEZSXPESLM

SNEEZE FURY HORSES WHEN AGAIN

EARLY FROSTS HARM THE CROPS

Do I need to read every word?

The answer to the _____ , "Do I need to _____ every word?" can be demonstrated by the fact that you ____ read this sentence. Because your _____ is intelligently trying __ make sense of this, it fills in the gaps. Also, even if p___t of a w___d is mi___i__g, you c___ still r___d

Activity guide

How to read a book

In this section we will explain how we introduce our set text,* The Third Wave *by Alvin Toffler, to the class.

Use these ideas with your own text, or modify them for your particular situation. They are based on the text, *How to Read a Book.* (see Further Reading section).

Preparation

It is important to ensure that each person has his or her own copy of the text. This means arranging a number of things beforehand: deciding which book to study, ordering enough copies, and having them available for this session. Students should purchase their own copies rather than use a class set or borrow from libraries. The reason for this is that the text now becomes a tool for learning about text structures and will be written on, underlined etc. Borrowed books cannot be marked with underlining, questions marks etc.

Getting an overview of a book

Activity 1

Students read

First, ask students to spend about 20 minutes finding out what the book is about. We give no other instruction apart from,

Spend 20 minutes seeing how much you can find out about this book .

If you observe this activity, you will notice a variety of strategies. Some will read the back cover, but many will open the book to Chapter 1 and begin reading, and continue for 20 minutes.

Activity 2

The Blurb

When the 20 minutes is over, don't get sidetracked into trying to work out what the book is really about. After a short desultory discussion say:

I will show how to get a good overview in about 20 minutes by reading the book backwards.

To do this, begin with the back cover, which is an overview of the book and often a summary of the book's main argument. It at least introduces the schema or claim the book will fill out.

Activity 3

The Index

Next, go to the front of the Index.

Ask the students to put a circle around or *mark with a fluorescent pen any entry that is more that three to five lines long.* Students are very reluctant to do this: they have been taught that books are sacred and not to be damaged.

We show students our own copies of books to show how much they have been scribbled on and marked up. In fact, one of our copies of Toffler has fallen in the bath so it is really in a battered shape. However, students must come to see books as tools for studying, not as cultural artifacts to be displayed on shelves. Be light-hearted but firm that they must write on their book — in pen! Hold the hand of those who can't bring themselves to do it.

They do this for the whole index. These circled entries provide a second layer of information to add to our growing schema of what the book is about — that is, the range of topics used by this book *to talk about its argument.*

The **main topics** are mentioned on many different pages and scattered through the book. For example, in Toffler, words like *bureacracy*, *industrialisation*, and *the family* are large entries. By the end of this activity students will be familiar with the range of topics the book calls on.

At this time, it is also important to use one index entry to show students how it actually works. Don't assume that people understand how an index entry works, so that:

- that
  family,46 ,58
  means you will find something about that topic on page 46 and again on page 58
- or that
  28-34
  means the topic is discussed on pages 28 through to 34
- or that
  58 def
  means that the item is defined on that page
- or that many indexes put the most important treatment of a topic in bold
  21, 35-7, **58-63** , 87-91

Activity 4 Bibliography

Continuing backward, we next inspect the bibliography. In Toffler, there are over 400 entries in the bibliography.

Make the point that a book doesn't just drop out of thin air, nor is it the outpouring of the genius of an isolated author. This will come as a surprise to most students who think writers just sit at their desks thinking thoughts and then writing them down. However, in reality a book is a result of a lots of other books. It does not stand in isolation from other books in the same discipline or topic area. It is a part of an ongoing debate in a particular field.

In reality a book is a result of lots of other books.

The fact that a book is dependent on other books can also explain why some books seem difficult to read; they are part of an ongoing

dialogue or debate which is new to us — we don't yet have a schema for it. Glancing through the bibliography can help us see where the author is "coming from"; who they use to support their claims; other books we may want to follow up; and so on.

Activity 5 Conclusion

Next, read the conclusion or the last few paragraphs to get an idea of where the book ends up, since the rest of the book has been an attempt to convince you that this conclusion is accurate, acceptable, and well reasoned.

Some people think that reading the conclusion is "cheating" or that it will "ruin the story." This response is more appropriate to fiction — with novels for example, this may be the case and certainly, if you are reading for pleasure you may not want to spoil the ending. However, with expository works, and in study, you are trying to develop a schema, so that as you read you know where the author is going.

Activity 6 Title and subtitle

From here, skip to the front of the book and look at the Title and Subtitle. They are significant in giving some idea to what the book is about and what its purpose is.

Activity 7 Publishing details

Follow this by an inspecting the publishing details. The date and place of publication become important later when you need to reference, but the date is also important for selecting material from the library. In some fields it can be important to have an up-to-date book, as modern knowledge changes very quickly.

Activity 8 Table of Contents

Next, examine the Table of Contents. The Table of Contents can be quite a good schema of the book. By reading through it, a reader often gains a clear idea of what the book is about. However, this is not always the case: for example, Toffler's Table of Contents is all couched in metaphors which are unintelligible until you have read each bit of the book. Still, most books have a very informative Table of Contents and it should always be checked out.

We also point out that there is a relationship between the typeface, and size of print which reflects the book's structure. For example, section headings are the same size, but different from the chapter headings. Subheadings in chapters are all the same size, but different from the section and chapter headings. These signal the importance of sections and their relationship to one another.

Activity 9

Preface and Introduction

Finally, look at the Preface or Introduction which usually overview of the book. Point out that although coming first in the book they were in fact written last. Usually, they will preview in brief the contents of each chaper. Students often make the mistake of going straight to the First Chapter without glancing at these overviews. They also help, along with the Table of Contents, with decisions about whether the book needs to be read as a whole or only particular chapters.

Skim Reading

Now are we ready to begin with Chapter 1?

Well, sort of, but you could also

- read the conclusion to Chapter 1
- and the Introduction to Chapter 2

to see where Chapter 1 ends up before you start.

In expository writing, chapter introductions and summaries are good starting points to gain an initial sense of what is being said in a book.

Now?

OK, but you could

- read the first few paragraphs
- skim the rest
- then read the conclusion

before you begin a more careful reading. By doing the steps above you will have a quite good schema of the book developed before you even start reading which makes the actual careful reading more manageable.

Studying

Notice that we have *dealt with only the book structures that lie outside the actual text itself.* We have looked at the add-on structures such as the cover blurb, the index, the bibliography, the Table of Contents, the Preface and the Introduction.

To deal with the actual structures and patterns *within the text itself* you need to be able to refer to a specific text. This needs to be done in the context of students actually reading a text and preparing to write, because the patterns you will point to in reading the text will be the same patterns students need to use in their writing.

Final Comment

Hopefully, in the future, we can — time and funds allowing — add another unit to this curriculum that deals specifically with text structures which help students read and write.

Getting an overview of a book

Back cover

Provides a good overview.

Index

Not only valuable for finding passages — an index also gives you an idea of the topics covered.

Bibliography

Shows you which disciplines the author has drawn from.

Preface

Nearly always written last.

Often provides an excellent summary and is usually a statement of the purpose of the book.

It can give you the author's perspective on the subject.

Table of Contents

Gives you a general feel for layout of the book and which parts are going to be of greatest interest and relevance.

Date of Publication

Shows you whether the material is up to date.

Sometimes that's important, sometimes not.

Title and Subtitle

These are not trivial.

Author

If she is familiar to you, you have a good idea of the level of the book. If not, it could be helpful to find out a little about her.

Levels of Reading

1 *first or* Pre reading

- get an overview
- work out the structure

2 *skimming or* Inspection reading

- read it through, don't stop
- don't look up anything
- if you don't understand, don't ponder

3 *studying or* Active reading

- be a metacognitive reader
- ask questions of the text
- ask what's this book on about

Reflections on Session 5

A Reflections Sheet like this one is provided at the end of the teaching resources for each session. Its purpose is to prompt your own metacognition by:

- *checking your general recall*
- *self-assessing the success of the material in preparing you to teach the session*
- *encouraging you to record anecdotal material from your own experience as a student.*

This time it's your turn to structure your own reflections on reading: